COVANA

LEGEND INSTALLATION MANUAL

2019
Revision 0
2019-02-27
C.A. 232868

TABLE OF CONTENTS

SAFETY

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE SAFETY INSTRUCTIONS AND REVIEW THEM REGULARLY.

READ AND FOLLOW ALL INSTRUCTIONS

Safety information

The COVANA cover was designed, tested and certified to be installed over a residential swim spa and under important installation instructions issued by COVANA. Any other type of usage will void the warranty and product certification.

The extra load maximum weight provided in the specification section of this manual is a provision for environmental outcomes, such as some snow or damp leaves that could accumulate on the cover, that are evenly distributed on the surface of the cover.

The COVANA cover was not designed to support any additional load or people walking or standing on it. Failure to observe this instruction will void the warranty and product certification.

The power safety cover meets ASTM F1346-91 requirements.

⚠ DANGER

- To reduce the risk of injury, do not allow children to use this product unless they are supervised at all times.
- Failure to follow all instructions may result in injury or even death.
- Do not allow people to climb or walk on the cover at anytime.
- Do not allow children to have access to the COVANA cover without supervision.
- Never operate the COVANA cover until all people and objects are out of the spa.

⚠ WARNING

- Be sure to keep the key switch and the key out of the reach of children.
- Do not put any type of fabric or plastic sheet, such as a tarpaulin, on the COVANA cover. This could overheat the cover and result in the deformation or delamination of the cover.
- Inspect the cover periodically. It should raise smoothly and evenly. Contact your COVANA dealer if any unusual mechanical sound is heard during use.
- Never use any type of pressure washer or buffer to clean any surface of the COVANA cover. This could result in premature wear or damage.

DO

- Remove the control key after operating the COVANA cover. Store the key in a secure location when not in use. Users must bring the control key in the spa with them to prevent the unauthorized operation of the cover.
- Never leave the key in the key switch.
- Check the cover frequently for signs of deterioration.
- Have any repairs, adjustments or mechanical work performed by your authorized COVANA dealer as soon as possible should you notice a malfunction.
- Close the cover when not in use or if the swim spa is not being monitored.
- A COVANA cover should only be operated by an adult.
- This appliance can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge **ONLY** if they are supervised or have received instructions regarding safe use of the cover. Children must not play with the appliance. Cleaning and user maintenance must not be performed by children without supervision.

DO NOT

- Operate the unit before all the mechanical and electrical connections are completed.
- Step on or stack anything on the COVANA control box or AC control box.
- Operate the COVANA cover while someone is in the swim spa.
- Climb, walk or stand on the COVANA cover at any time.
- Leave the COVANA cover open for more than 12 hours. This could cause the cover to warp overtime.
- Converge or directly reflect sunlight on the cover. This could cause permanent damage.
- Wash the cover with harsh chemicals or cleaners.

- Use a pressure washer to clean any component of the COVANA cover. This could result in premature wear or damage.

⚠ CAUTION

- Be sure to follow all instructions in this manual and use only COVANA-approved accessories and tools.
- Do not roll the COVANA cover onto its side or slide it on its side. This will damage the siding.
- After removing a part, always place it in a safe place on a clean and level surface to ensure proper functionality.
- All four posts of the COVANA cover must be properly anchored to the swim spa frame using the tub mounting brackets and arms.
- This product mainly contains steel, plastic, copper (Cu), fiberglass, foam and aluminum (Al). Please recycle them properly.
- *For the battery-operated option or the emergency backup option*, both are powered by a rechargeable sealed lead acid battery. Please recycle it properly.

Avoiding the risk of electrocution

⚠ ELECTRICAL DANGER

- Failure to comply with these instructions may result in death by electrocution or serious injury. Disconnect or turn off and secure all power supplies before starting any intervention on the COVANA cover.
- For *AC operated model*: A disconnect mean needs to be incorporated into the fixed wiring at the time of installation. This mean must be accessible to the user or service technician to turn the power off for future maintenance or repair.
- Always have a licenced electrician contractor perform any electrical maintenance or repairs on the COVANA cover. The wiring must comply with all applicable electrical codes and regulations.
- *For AC-operated models:* The COVANA operator must be connected to a circuit that is protected by a dedicated ground fault circuit interrupter (GFCI) that complies with all applicable local electrical codes and regulations.
- Install the COVANA cover in such a way that drainage directs water away from the electrical components and base mechanical components.
- Do not connect any auxiliary components to the electrical system of the COVANA cover unless they have been approved by COVANA.
- Replace electrical components with original components provided or approved by COVANA. Ask your dealer for replacement parts.
- To reduce the risk of electric shock, replace all damaged cables immediately. Failure to do so may result in death or serious personal injury due to electrocution.
- Do not bury any electrical cables. A buried cable may result in death or serious personal injury due to electrocution if direct burial-type cable is not used, or if improper digging occurs.

⚠ ELECTRICAL WARNING

for AC-operated model

- To reduce the risk of electric shock, the green-colored terminal or the terminal marked “g,” “gr,” “ground,” “grounding” or with a ⏚ symbol located inside the supply terminal box or compartment must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying the equipment.
- One bonding lug is installed on one non-motor jack. To reduce the risk of electric shock, connect the COVANA cover bounding lug to the local common bonding grid in the area. Use terminals with an insulated or bare copper conductor no smaller than No. 6 AWG (4.11 mm).
- All field-installed metal components, such as rails, ladders, drains or other similar hardware, within 10 ft (3 m) of the swim spa must be bonded to the equipment grounding bus with copper conductors no smaller than No. 6 AWG (4.11 mm). (NEC art. 680.)

⚠ WARNING REGARDING DRUG OR ALCOHOL USE

- The use of drugs or alcohol while operating the COVANA cover is strictly prohibited. The impairment of judgment, vision or hearing might affect the safety of other people or result in death.

⚠ WARNING REGARDING MODIFICATIONS TO THE COVANA COVER

- Any modifications to the COVANA cover, such as mechanical, electrical or aesthetic ones, may cause the cover to operate in an unwanted or dangerous way. Furthermore, these modifications might void the warranty and certification.
- The COVANA cover was designed, tested and certified for the sole purpose of covering and securing a spa. Any installation that differs in whole or in part from this purpose will void the warranty and certification**.**

SAVE THESE INSTRUCTIONS

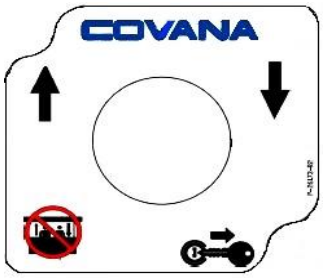
LABELLING

⚠ WARNING

- Removing any labels from the COVANA cover will void product certification. All labels should always remain visible. It is the owners' responsibility to ensure these labels are always visible and should never be removed

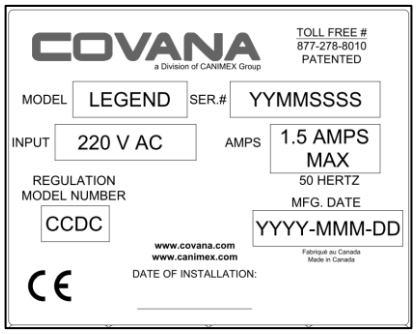
Risk of electrocution warning, located on the AC control box.

(For AC-operated models only)



Key operating diagram, located on the key switch.

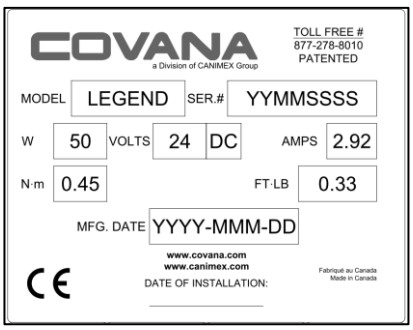
Drowning risk, located on all four sides of the COVANA cover



Specification label, located on the AC control box

Note: This label provides the serial number

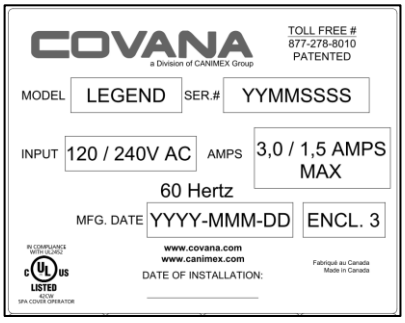
(For AC operated model only, European Only)



Specification label, located on the white control box

Note: This label provides the serial number

(For Battery-operated models only)

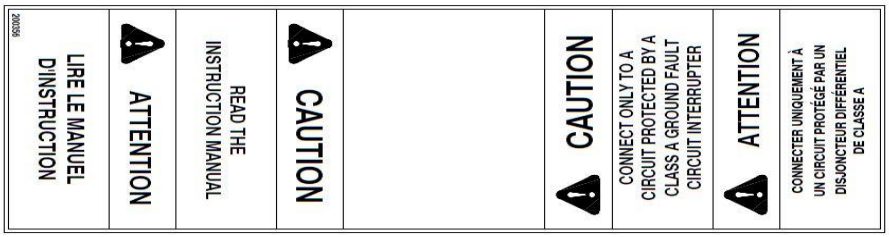


Specification label, located on the AC control box

Note: This label provides the serial number

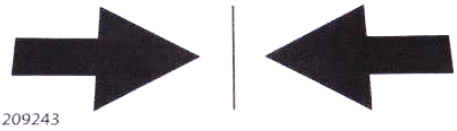
(For AC-operated models only, North America Only)

Key switch warning, located on the key switch cable



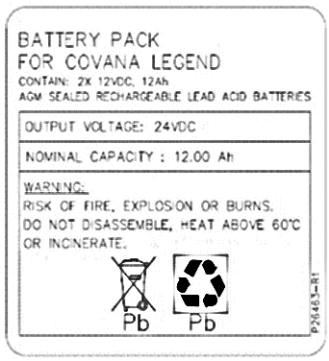
Electrical information, located on the key switch cable

Do not step on cover label, located of end C-Channels of the COVANA cover



Center label, located on 94 9/16in (240 cm) C-Channel
(remove after installation)

Top label, located on I-Beams and Escape hatch opening
(Hidden when assembled)



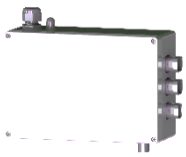
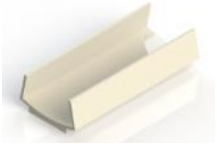
Battery specification label, located on the back of the battery pack.

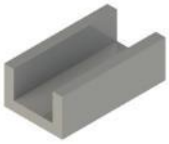
Do not step symbol,
located on AC control box
(For AC operated model only)

Maintenance information, located on one of the C-Channels.

GLOSSARY

Part	Figure	Function
All-weather seal	 Figure 1	The all-weather seal will help protect sleeves from damage due to weather.
AC control box **(AC-operated model only)**	 Figure 2	The AC control box powers and controls the lifting mechanism of the COVANA cover.
Battery pack (***Battery-operated model and battery backup only***)	 Figure 3	The battery pack is a sealed case where the two 12 V batteries are located. The harness that will connect to the charger and control box is on its right.
Binding block	 Figure 4	The binding block is used during installation to tighten the I-beams with the panels.
C-channel	 Figure 5	The C-channel is the outer frame of the cover.

Control box **(for battery-operated model only)**	 Figure 6	The control box manages the movement of the unit.
Control box housing **(for battery-operated model only)**	 Figure 7	The control box contains all the electronic parts of the COVANA.
Contour seal	 Figure 8	The contour seal ensures uniform contact between the cover and the swim spa. It prevents excessive water and other contaminants from entering the swim spa. It also reduces heat loss.
Contour seal connector	 Figure 9	The seal connector is used to link both ends of the seal.
Contour seal installation clip	 Figure 10	Contour seal installation clips are used during the installation process to ensure the seal is installed properly.
Corner bracket	 Figure 11	The corner brackets link the C-channels on the side to the ones in front and back.

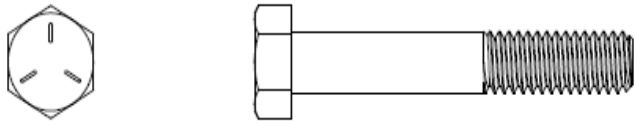
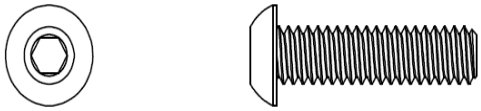
Corner cover	 Figure 12	The corner cover is an aesthetic aluminum grid fixed to the corner bracket.
Drive shaft	 Figure 13	The drive shaft transmits the power between the jack assemblies.
Escape hatch	 Figure 14	The escape hatch is a removable panel and part of the cover. Refer to *Using the escape hatch* section.
Hammer block	 Figure 15	The hammer block is a piece of plastic or wood used during the installation to hit on the panels without causing damage.
I-beam	 Figure 16	The I-beams are the aluminum extrusions installed between the panels.
Foam spacer	 Figure 17	The installation foam is used during the installation process to protect the swim spa from direct contact with the cover.

I to C connection plate (long)	 Figure 18	The long I-to-C connection plate makes the link between I-beam, posts and sleeves.
I to C connection plate (short)	 Figure 19	The short I-to-C connection plate makes the link between I-beam and C-channels.
Jack (motor and non-motor)	 Figure 20	The jack allows the cover to go up and down.
I to C spacer	 Figure 21	The I to C spacer is used to prevent over tightening of the I to C connection plates.
Key switch	 Figure 22	The key switch is used to operate the COVANA cover.
Mount bracket arm	 Figure 23	This mount bracket arm will link the sleeves and swim spa together.

Post mount bracket **or** **Dual side bracket (optional)**	 (optional) Figure 24	Post mount bracket links the sleeves and posts to the cover. Dual side brackets are used for higher or lower swim spas.
Sleeve	 Figure 25	The sleeve is an aluminum case for the lifting mechanism.
Support bracket	 Figure 26	The support bracket strengthens the joint between the center C-channel to the C-channel on either side. It clips and is screwed on the top and bottom.
Top plate	 Figure 27	The top plate is a cover that is installed on the sleeve assembly. It protects the lifting mechanism from debris.
Tub mount bracket	 Figure 28	This bracket links the cover to the swim spa. There is one tub mount bracket located at the top of the outer sleeve for every post. If the swim spa is 54” (137 cm) high and under, two of these brackets are mounted on the swim spa per post.

Extended tub mount bracket (Optional)	 Figure 29	The extended tub mount bracket is optional for swim spas over 54” (137 cm). This bracket will replace the upper tub mount bracket on the swim spa and will allow for better mounting options.
U-frame	 Figure 30	The U-frames protect the drive shaft. They are fastened to the bottom of the posts.
Wiper bracket	 Figure 31	The wiper bracket is adhered under the I-beams. This part is required to ensure the waterproofing of the COVANA cover.

HARDWARE IDENTIFICATION TABLE

Quantity	Visual representation	Description
9x		5/16-18 x 2” This hexagonal bolt is used for the lower U-frame assembly.
17x **(33x for model with long support bracket approx. 42’’[1,066 mm])**		10-24 x 1/2” thread cutting screw. Used on the panel assembly.
25x		#8 x 1/2” Self-tapping screw. Used to fasten the corner brackets.
9x		#8 x1/2” Self-drilling screw. Used to fasten the top plates.
17x		1/4-20 x 3/4” Carriage bolt. Used for fastening the sleeve to the post mount bracket assemblies.
21x		1/4-20 x 5/8” Carriage bolt. Used for fastening the I-beam assemblies**. Note: 13x for models 12’ to 15’.**
50x		1/4-20 x 1” Button hex drive bolt. Used for mount brackets and roof assemblies.

33x		#10-12 x 3/4” Screws used for anchoring the tub mount brackets.
33x		1/4” Lock washer used for the mount brackets and sleeve assemblies.
33x		1/4” Flat stainless steel washer used for mount brackets and cover assembly.
70x		1/4-20 Hex nut. Used for sleeve and mount brackets assemblies. Also used for I-beam assemblies**. Note: 62x for models from 12’ to 15’.**
9x		5/16-18 Nylon insert locknut. Used for the U-frame assemblies.
1x		5/32” Hex key. Used for fastening the 1/4-20 x 1” Button hex drive bolts.
1x		#2 x 6” Robertson drive bit.
1x		5/32” drill bit used to drill holes on the support bracket.

INSTALLATION PREPARATION

To ensure the safe use of the COVANA cover, it must be installed on a properly prepared surface. It is important to adequately prepare the foundation and carefully read the following recommendations.

Location considerations

- Ensure the future location of the COVANA cover is not subject to falling water or debrisfrom another rooftop.
- Ensure that the base of the cover is not in a flood zone. Any damage caused by flooding or water accumulation will not be covered under the warranty.
- Ensure that there are no obstacles, such as branches or electrical power lines, in the operating range of the COVANA cover.
- Refer to *Technical specifications* section for dimensions of cover.
- Ensure there is safe access to the swim spa, free of obstacles or debris.
- All the base components of the COVANA cover must be supported by the foundation.
- Do not converge or directly reflect sunlight on the cover. This could cause permanent damage (i.e.: reflection by a window).
- Ensure the COVANA cover is installed on a clean surface free of any vegetation, such as grass, branches or roots, or mineral contaminants, such as rocks, dust or sand.
- The key switch must be permanently mounted and located 5’ (1.5 m) away from the swim spa and 5’ (1.5 m) above the deck or ground level. Ensure the user has a clear view of the COVANA cover when operating it. Furthermore, the key switch terminal should be located in a place where no water or debris could fall on it from another rooftop (Figure 32).

⚠ WARNING

- Failure to permanently install the key switch as indicated could cause serious injury or even death and void the warranty and certification. Only the proper installation of the key switch combined with the suggested procedures and caution will reduce such risks.
- Do not place the cover in an area prone to snow accumulation or water runoff.

⚠ DANGER

- Failure to properly install the key switch according to these instructions could result in injury or even death.

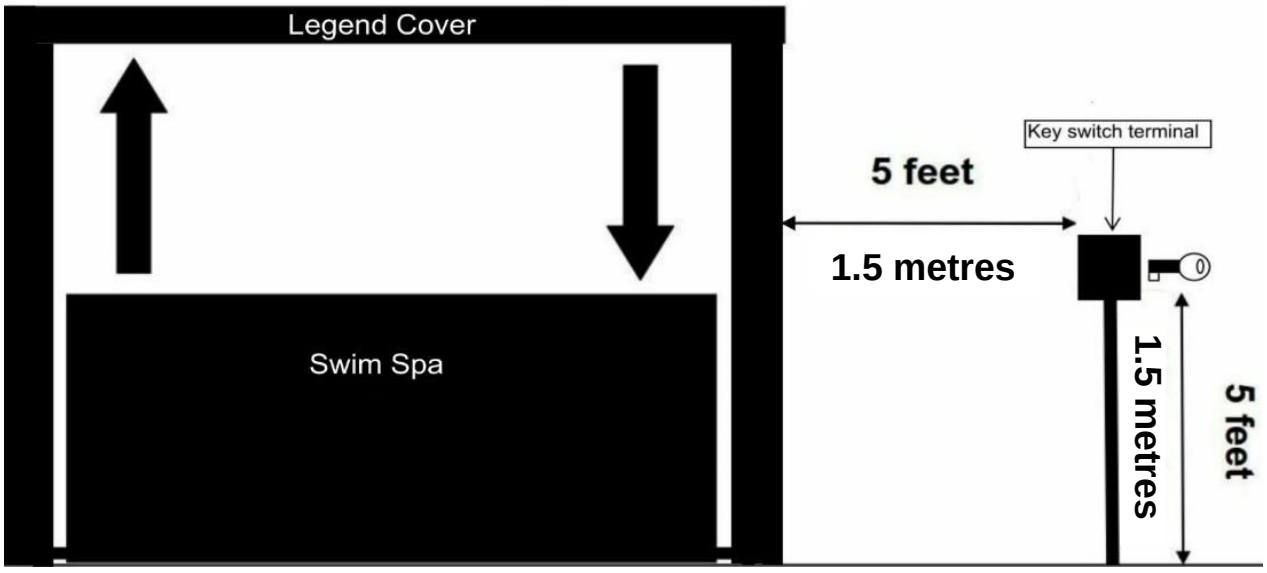


Figure 32

Foundation preparation

- The COVANA cover requires a clean, flat and level surface, such as an engineered wood deck or a concrete slab.
- Each of the four jacks of the COVANA cover must be properly fastened to the swim spa frame. It is the installer's responsibility to ensure the COVANA cover is properly fastened and in a safe manner.
- Just like the swim spa, the COVANA cover requires a solid foundation. The foundation for the COVANA cover must be able to support at least 1,000 lb (454 kg).
- The foundation must be levelled with a maximum tolerance of 1" (2.5 cm) over a 153" (3.89 m) diagonal section and 112" (2.84 m) by 104 1/4" (2.65 m) rectangle (Figure 33). The annual variation in levelness for the same diagonal section cannot exceed 1/4" (6 mm).
- A path at least 1" wide all around the perimeter of the swim spa is necessary to properly install the seal.

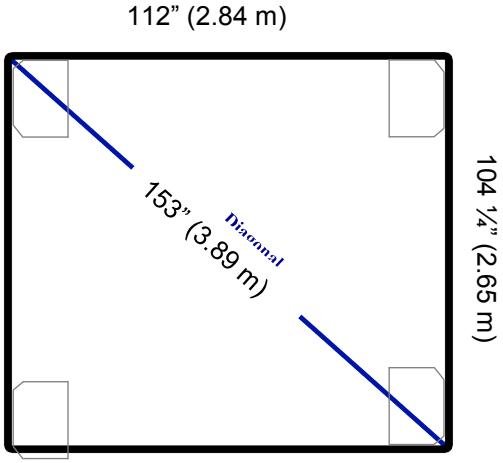


Figure 33

⚠ CAUTION

- Damage caused by inadequate foundation construction is not covered by the COVANA warranty. It is the responsibility of the owner to provide a proper foundation.
- Failure to follow these guidelines might cause permanent damage or the improper functioning of the COVANA cover. Such damage might not be covered by the warranty.

INSTALLATION

Required tools for complete installation

- Scissors or a retractable utility knife
- Robertson screwdriver
- Rubber mallet
- Hammer
- Phillips screwdriver
- 2x 50’ (15 m) Ratchet straps
- 7/16’’ (11 mm) socket wrench and spanner
- 1/2" (13 mm) socket wrench and spanner
- 5/32’’ (4 mm) Allen key (Supplied)
- 26’ (8 m) measuring tape
- SAE or metric Socket kit
- 48” (122 cm) level
- Stepladder

⚠ CAUTION

The COVANA cover should be installed by a certified COVANA installer. Having the COVANA cover installed by someone who is not certified will void the warranty. Ask your local COVANA dealer for information on certified installers.

Uncrating

1) Before uncrating the unit, ensure there is no visible damage to the crate. In case of any suspicious damage, take pictures first. If any damage is discovered, please call the COVANA customer service immediately.
2) Stand the crate in the vertical position. Ensure wind conditions allow for this to be done safely.
3) Use the sheet metal cutter to cut and remove the metal strap around the crate.
4) Unscrew the #8-10 x 1.5” Robertson screws holding the front cover – 5 screws per side and 3 on the top. You might need a stepladder to reach the top screws. (Figure 34)
5) Remove the front cover and discard. (Figure 34)
6) Remove the paper sheet covering parts inside the crate.
7) Unscrew the two Robertson #8-10 x 1.5” screws holding the top of the sleeves – four sleeves: eight screws in total. (Figure 35)
8) Remove all four sleeve assemblies.

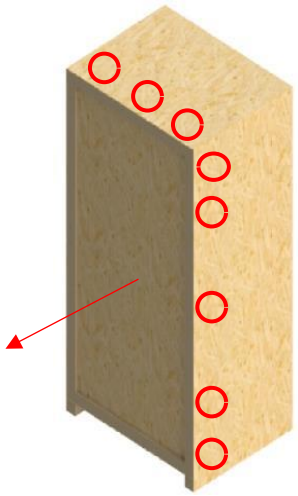


Figure 34

NOTE: For models with long support bracket (approx. 42’’[1066mm]), remove the joint bracket from inside the sleeve

Figure 35

9) Remove all boxes above the jack box, place them in a safe place (Figure 36).

Note: All the hardware, brackets and other parts are located in these boxes.

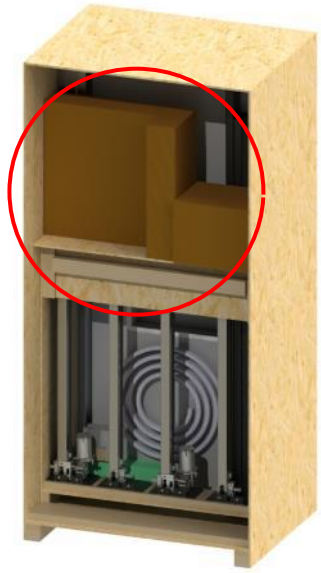


Figure 36

10) Unscrew the Robertson #8-10 x 1.5” screws holding the jack box – four screws per side: two screws at the top, two screws at the bottom. The blue circle represents the screw holding the crate, the jack box and the binding blocks. This screw is only on the left side of the crate. Unscrew it as well. (Figure 37)

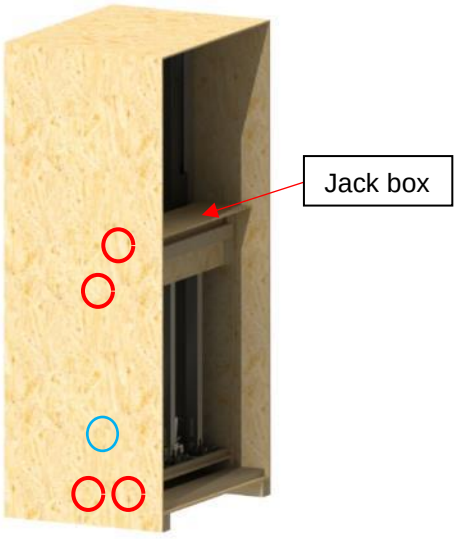


Figure 37

11) With the help of another person, remove the jack box from the crate and place it in a safe place. (Figure 38)

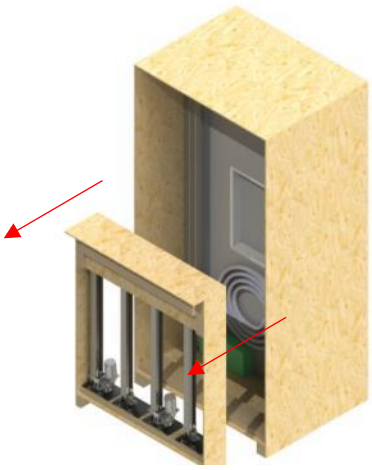


Figure 38

⚠ WARNING

- Carefully slide the jack box out. Some parts can be damaged if the jack box is pulled out too roughly.

12) Take the binding blocks out of the jack box and place them in a safe place, you will need them later. (Figure 39)

13) Remove the jack assembly by unscrewing the Robertson #8-10 x 1.5" screws. There are two screws at the bottom of each jack. (Figure 39)

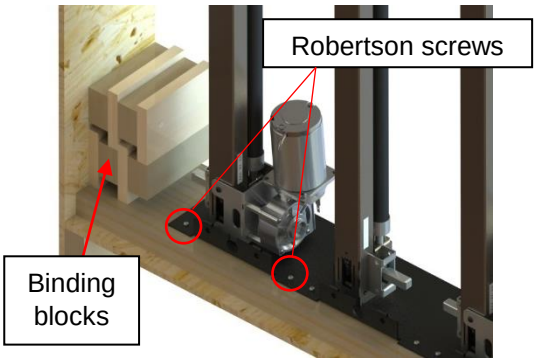


Figure 39

14) Unscrew jack assembly tops where they will be fastened with two Robertson #8-10 x 1.5" screws per top. Once completed, place jack in a safe place on the ground. (Figure 40)

⚠ CAUTION

- Jacks may be greasy; wash your hands after manipulations or use gloves.

15) Remove the seal and the foam spacers from the crate and place them in a safe place (Figure 41).

16) Remove the C-Channels and the I-Beams from the crate and place them in a safe place (Figure 41).

Figure 40

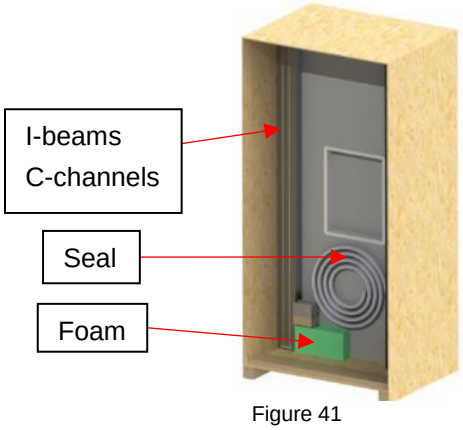


Figure 41

17) With the help of another person, lay the crate horizontally on its back. There should be one person on each side of the crate. (Figure 42)

Figure 42

⚠WARNING

- The crate is heavy; you may require a third person for rotating the crate.

18) Unscrew the 11 Robertson #8-10 x 1.5” screws (four on each side and three at the bottom) holding the top of the crate. Then, remove the top of the crate (Figure 43).

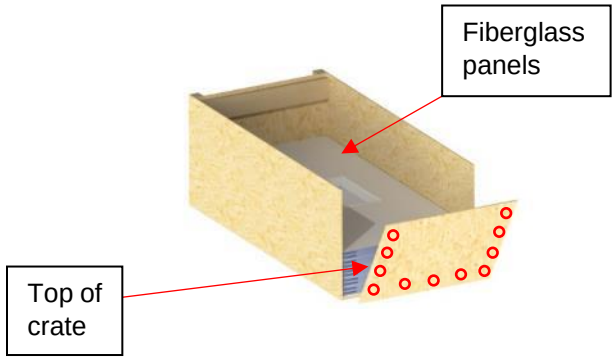


Figure 43

⚠WARNING

- Do not further dismantle the crate; it will be needed for future installation steps.

19) Unscrew the blocks that retain the panels. Remove the fiberglass panels from the crate and place them in a safe place (Figure 44).

Figure 44

⚠WARNING

- Panels are fragile. Handle with care, they can easily be scratched or damaged.

Cover assembly

⚠ WARNING

- Before assembling, keep in mind not to overtighten bolts. Power tools **must not** be used. The bolts will break under too much torque.

Note: The following figures represent the assembly of a 19' model. The number of panels may vary depending on the actual cover size you are assembling.

1) Attach the foam spacers to the top of the swim spa near each corner using the masking tape provided in the seal bag. There must be at least four foam spacers on each long side. Do not stack two pieces of foam high (Figure 45).

⚠ CAUTION

- The foam pieces must be placed on the flat top surface of the swim spa.

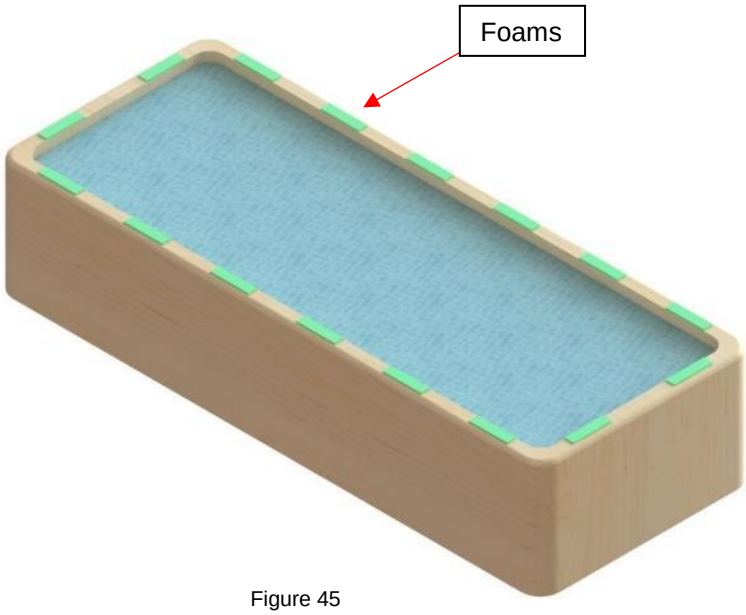


Figure 45

2) Assemble **two I to C long connection plates per I-beam** as shown in Figure 46. Use 1/4-20 x 5/8" carriage bolts, 1/4-20 nuts and 7/16" (11 mm) socket wrench and spanner. Insert the I to C spacer in between the I to C connection plate and the bracket. The carriage bolts and nuts can now be properly tightened. (Figure 46).

Note: The trimmed portion of the I to C long connection plates must be oriented in the same direction as the bent part of the I to C bracket. Do not forget to place the inserts facing inwards (Figure 46).

⚠ CAUTION

- Two I to C long connection plates must be installed per I-beam.
- Pay attention to the orientation of the trimmed portion of the I to C long connection plate.
- Ensure these bolts and nuts are not overly tight so they don't bend the the I to C-bracket and the I to C long connection plate.
- Ensure the upright position of I-beam by ensuring the top sticker, shown in Figure 47, is pointed upwards.
- Make sure there is grease in the insert before installing it; if not, apply some anti-seize lubricant for stainless steel in the inserts.

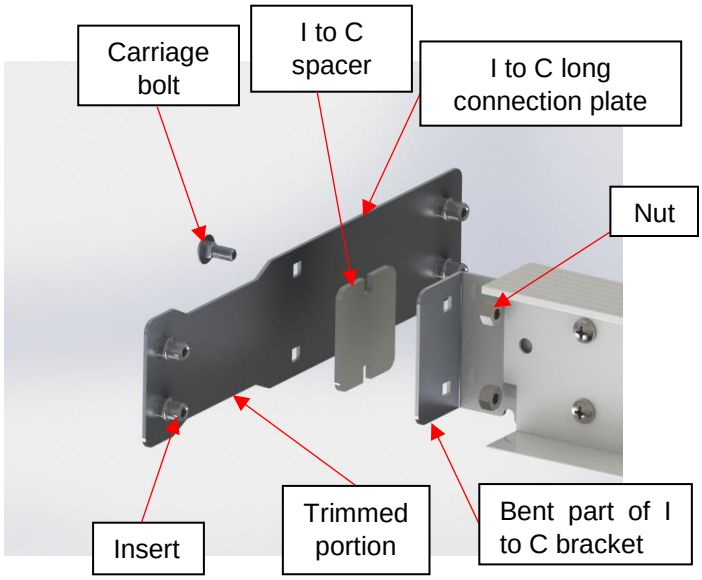


Figure 46

3) Repeat step 2 for a second assembly.

Figure 47

4) For models ranging from **12' to 15',** you will need to install **one** I-beam with **two short** I to C connection plates per I-beam. (Figure 48)

- Use 1/4-20 x 5/8" carriage bolts, 1/4-20 nuts and 7/16" (11 mm) socket wrench and spanner. Insert the I to C spacer in between the I to C connection plate and the bracket. The carriage bolts and nuts can now be properly tightened. (Figure 48).

⚠ CAUTION

- Two short I to C connection plates must be installed per I-beam.
- Ensure these bolts and nuts are not overly tight so they don't bend the I to C-bracket and the I to C long connection plate.

5) For models ranging from **16' to 20'** you will need to install **three** I-beams with **two short** I to C connection plates per I-beam (Figure 48).

- Use 1/4-20 x 5/8" carriage bolts, 1/4-20 nuts and 7/16" (11 mm) socket wrench and spanner. Ensure these bolts and nuts are not overly tight so they don't bend the the I to C-bracket and the I to C long connection plate (Figure 48).

⚠ CAUTION

- Two I to C short connection plates must be installed per I-beam.
- Ensure these bolts and nuts are not overly tight so they don't bend the the I to C-bracket and the I to C long connection plate.

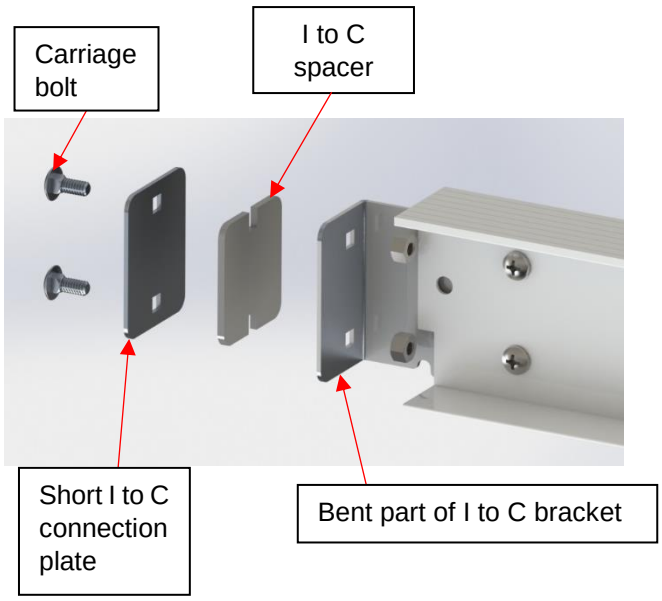


Figure 48

6) It is recommended to use a table or the shipping crate as a base to build the middle top section of the cover, and later transfer it to the swim spa once it is assembled.

⚠CAUTION

- If there is limited space, please follow the next steps while assembling **directly onto the swim spa**. Avoid scratching the spa or any components of the cover.

7) Place the escape hatch panel (approx 47” x 96” [119 cm x 244 cm]) onto the middle of the installation surface. **Ensure the seal around the escape hatch opening is on top** (Figure 49) **and the top sticker located in the panel’s hole is properly oriented** (Figure 50).

8) Assemble the long C-Channels, 94 9/16” (240 cm), over the previously placed panel so that the middle of the C-Channel, premarked with a center sticker (Figure 51), is aligned with the edge of the panel (Figure 49).

⚠WARNING

- When assembling the C-channel onto the foam panel, be careful not to delaminate the fiberglass.

9) Slide one I-beam with short I to C connection plates in the C-channels. Place the I-beam in such a manner where the bent portion of I to C bracket is pointing inwards (Figure 52). Ensure it fits snug with the foam panel. Ensure the sticker in the I-beam is pointing upwards (Figure 50).

⚠CAUTION

- Ensure the upright position of I-beam.
- Ensure the proper insertion of the short I to C connection plate in the C-channel (Figure 53).
- When inserting the I-beam into the fiberglass foam panel, ensure not to chip the fiberglass.
- Make sure the I-beam has cleared bottom and top section.
- While inserting the I-beam in the C-channel, make sure is it always square with the C-channel.

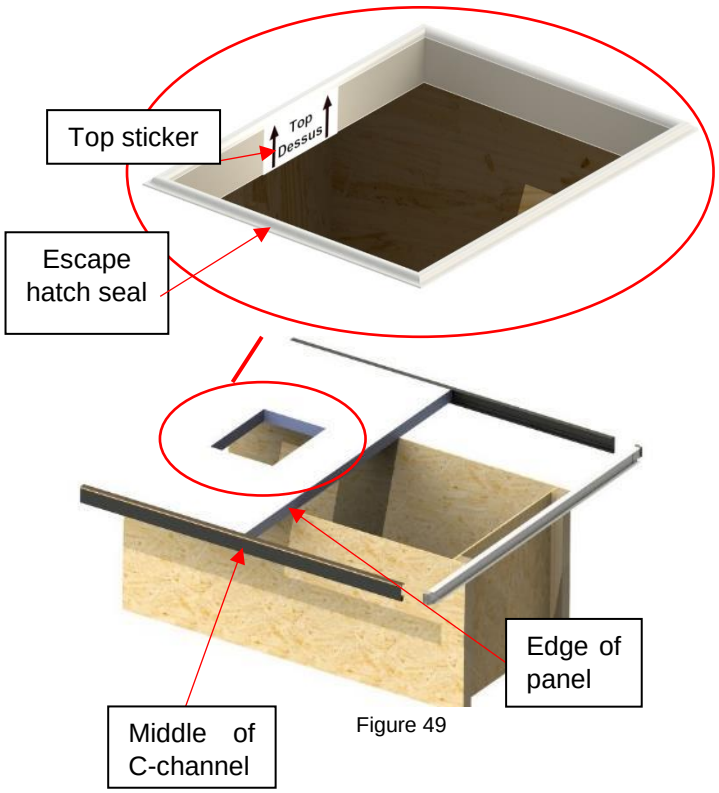


Figure 49

Figure 51

Figure 50

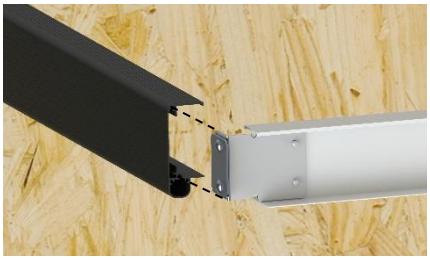


Figure 52

Figure 53

10) Slide the large (approx. 47” x 96” (119 cm x 243 cm)) panel into the C-channels. Ensure the I-beam has slid over the panel on both the bottom and top side (Figure 54).

⚠CAUTION

- Ensure that the panel is pushed as far as possible by hand and is completely inserted in the I-beam.
- If you have a color panel, make sure the colored side is on top.

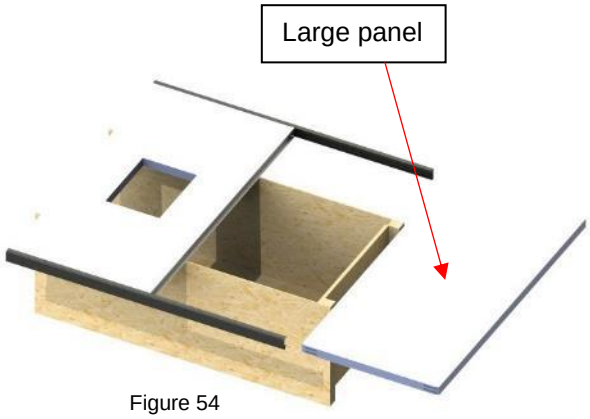


Figure 54

11) Install the I-Beams with the long I to C connection plates. Ensure the trimmed portion of the I to C connection plate faces toward the end of the cover (Figure 55 and Figure 56).

⚠WARNING

- Ensure I-beam is oriented toward the top as indicated with the sticker (Figure 50).
- When assembling the C-channel onto the foam panel, be careful not to delaminate the fiberglass.
- Make sure the I-beam has cleared the bottom and top section.

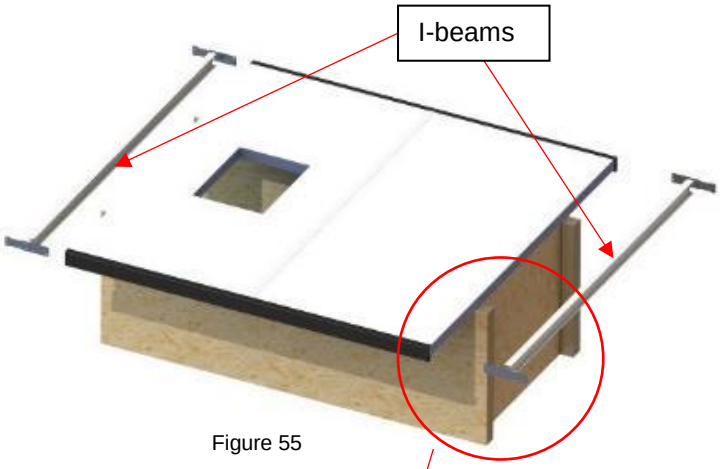


Figure 55

12) Align by hand the C-channels (left and right sides) in such a matter that the I to C connection plate holes are visible (Figure 56).

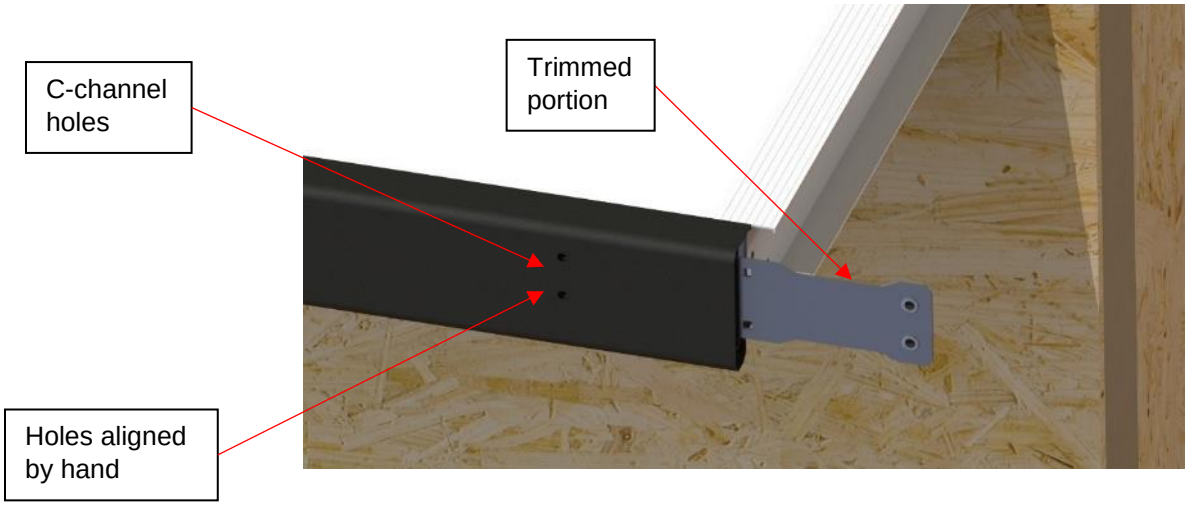


Figure 56

13) Align the holes of the support bracket, the post mount bracket and the C-channel by hand. Assemble them with the 1/4-20 x 1” hex drive rounded head screws (5/32” (4 mm) drive). **DO NOT** install the bolts on the other end of the brackets yet (Figure 57).

Note: For some spa, optional dual side brackets are needed to mount the cover to the posts. The installation of these brackets is done the same way as for the post-mount brackets described at step 13 (Figure 58).

14) Repeat step 13 for the opposite side of the cover (Figure 59).

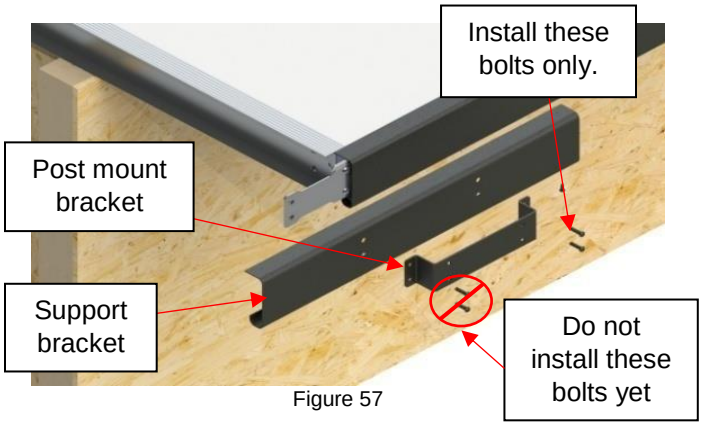


Figure 57

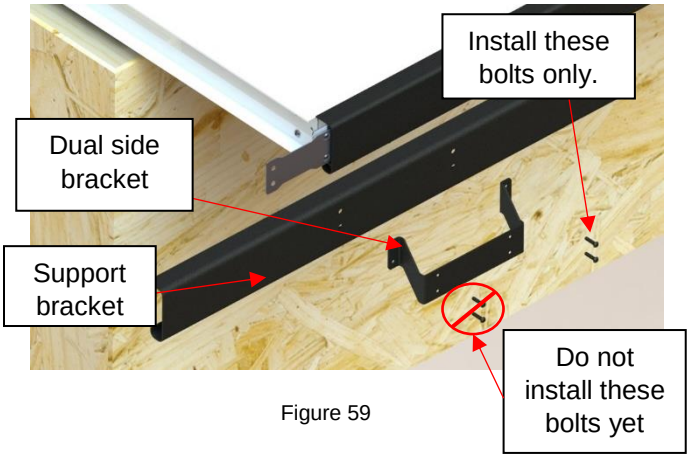


Figure 59

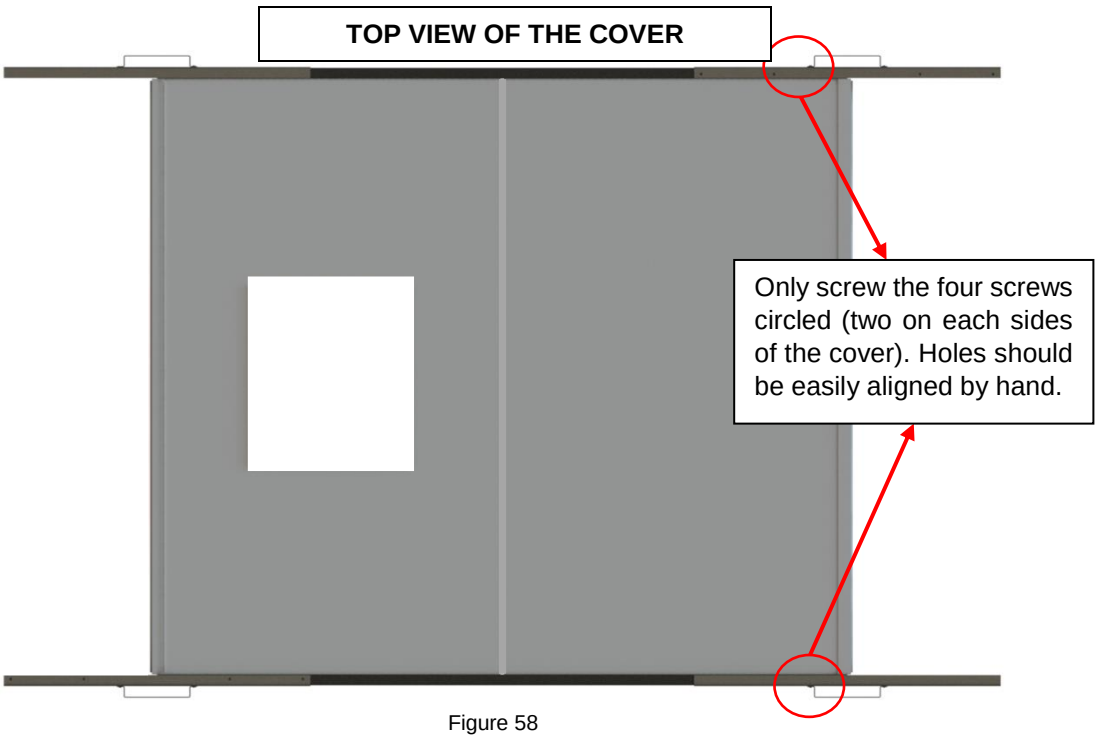


Figure 58

15) Use the binding blocks provided and two 50’ (15 m) ratchet straps to help you align the side holes on the other end of the assembly (Figure 60 and Figure 61).

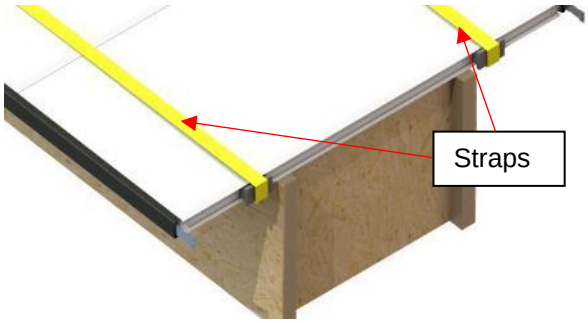


Figure 60

⚠CAUTION

- Use cardboard or non-abrasive material under the ratchet of the straps. The ratchet could damage the fiberglass panel.
- Ensure the binding blocks are correctly positioned when strapping. This will prevent the straps from bending the I-beam (Figure 61).

16) Tighten the straps until one set of the holes lines up with the threaded inserts on the I to C connection plate.

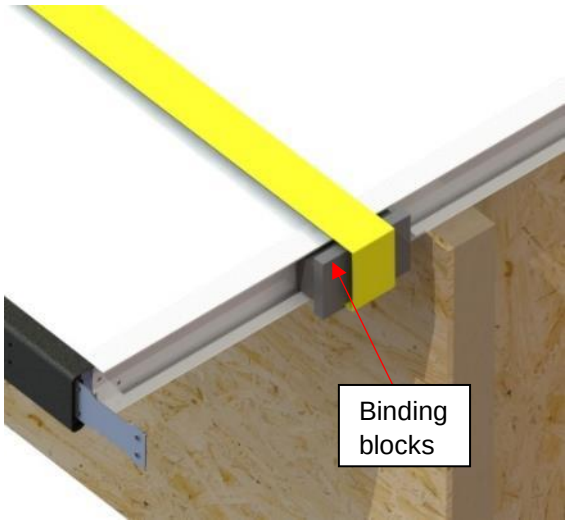


Figure 61

⚠WARNING

- Do not over tighten the straps. Over tightening might permanently damage the sealing components of the I-Beams and allow for water infiltration. Tighten slowly and stop as soon as holes align (figure 56).

17) Assemble the support bracket on the other end of the cover (Figure 62).

18) Attach the post mount bracket and the support bracket with the 1/4-20 x 1” hex drive rounded head screws (5/32” (4 mm) drive) (63.9 in-lbs) (Figure 62).

19) Repeat steps 17 and 18 for the opposite side of the cover (Figure 63).

20) Release binding straps. (The assembly will hold itself together.)

21) Remove only the center stickers on the C-channels (Figure 64).

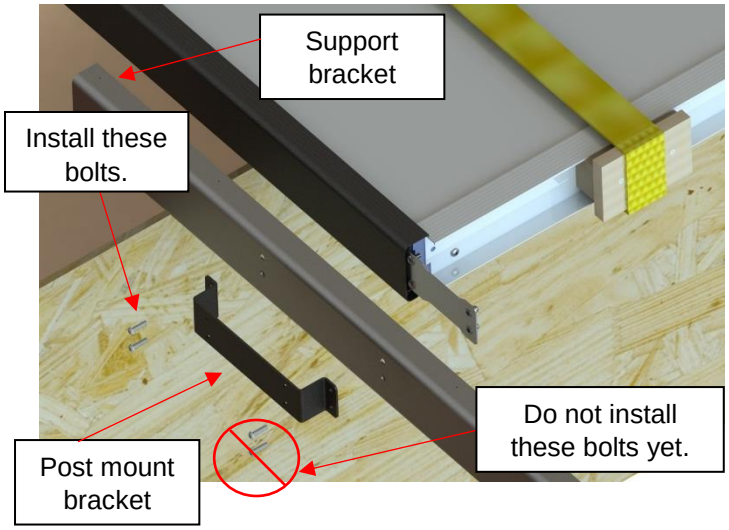


Figure 62

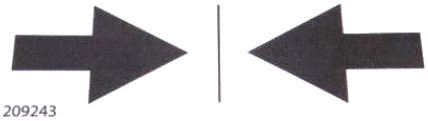


Figure 64

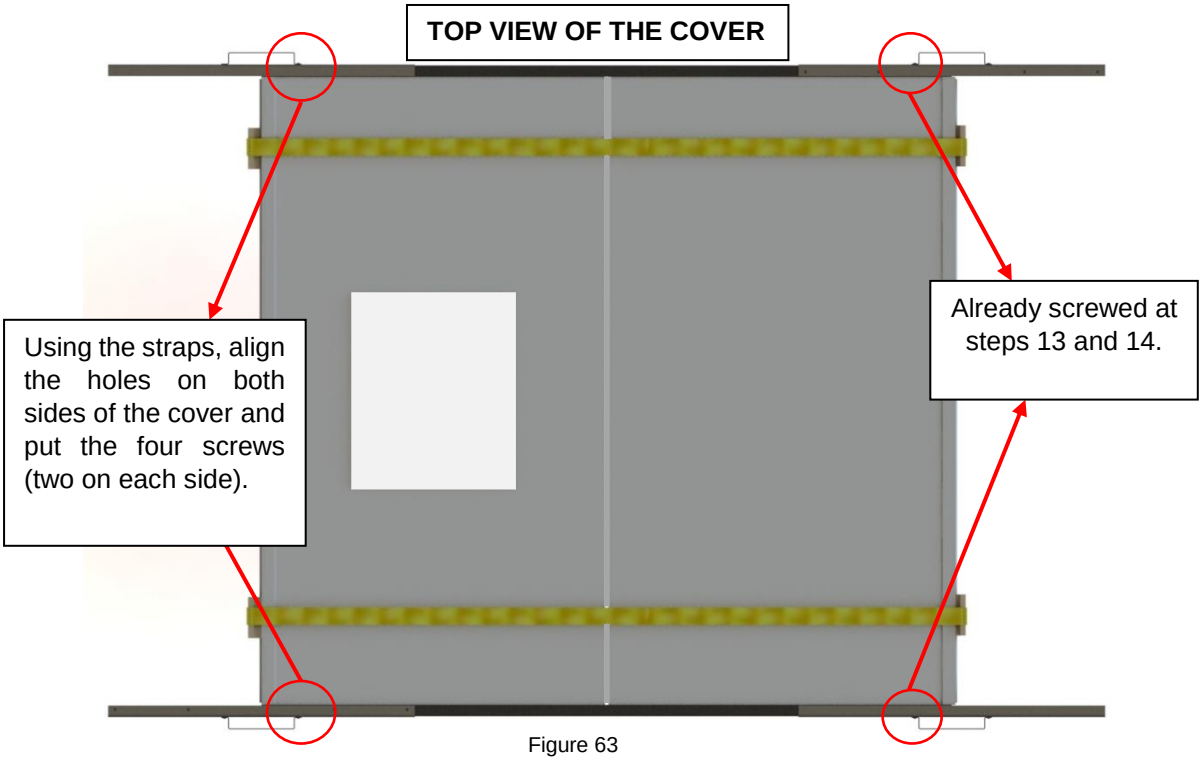


Figure 63

22) Carefully position the assembled center section of the cover onto the swim spa. Try to align the cover as best as possible.

⚠CAUTION

- Failure to gently position the cover onto the swim spa could result in scratching the acrylic of the spa or damaging the cover.
- Ensure foam spacers are correctly positioned under the I-beams to simulate seal height.

23) Insert the shortest C-Channel inside the support bracket. **Note:** There are **only** two holes at the end of these parts. The holes must go inwards towards cover (Figure 66, Figure 67, Figure 68 and Figure 69).

Note: Ensure that the long I to C connection plate is well inserted into the short C-channel (Figure 68).

24) Screw in the remaining Hex drive 1/4-20 x 1" rounded head screw on the support bracket. (5/32" (4 mm) drive) (63.9 in-lbs) (Figure 69 and Figure 70).

Note: Ensure that the bolts pass through the end C-channel holes.

25) Repeat steps 23 and 24 for all four sides.

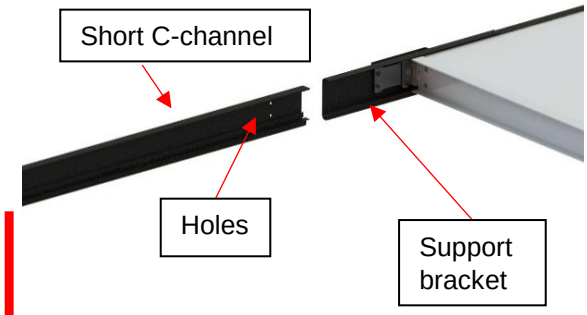


Figure 66

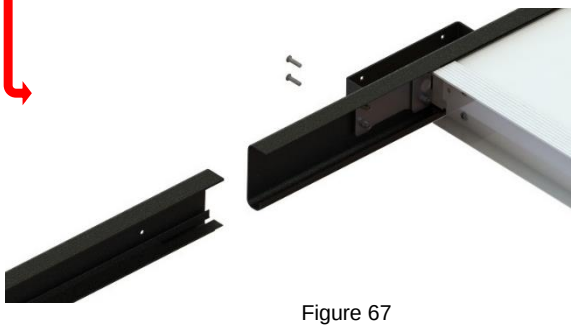


Figure 67

Figure 68

Figure 69

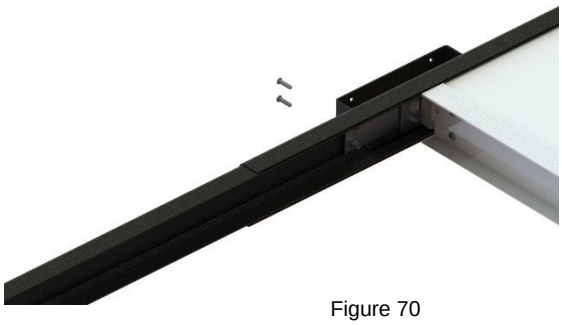


Figure 70

For models 12' to 15' only, go to step 29.

26) Slide in one of the remaining rectangular panels into the C-channels. (Figure 73)

⚠CAUTION

- It is very important to check if the I-beams have locked in properly into the foam panels.
- If you have a color panel, make sure the colored side is on top.

⚠WARNING

- When assembling the C-channel onto the foam panel, be careful not to delaminate the fiberglass.
- Ensure the I-beam has cleared the bottom and top section.

27) Use the hammer block to ensure the panel is fully engaged in the I-beam. Gently strike the **center** of the block and ensure the block is continuously in contact with the panel edge (Figure 74). Strike the hammer block on each side of the panel for a better fit on the panel (Figure 74).

⚠WARNING

- Ensure the hammer block is properly fitted to the foam panel before striking. Failure to use the hammer block properly could break the lamination of the fiberglass panel (Figure 74).

28) Slide the I-Beam with the short I to C connection plates in the C-Channels with the bent portion pointing inwards (Figure 71).

29) Insert one of the end panels with the tapered end toward the end of the cover. The end panels are tapered with a 45-degree cut. (Figure 72).

⚠CAUTION

- It is very important to check if the I-beams have locked in properly into the foam panels.
- If you have a color panel, make sure the colored side is on top

⚠ WARNING

- When assembling the C-channel onto the foam panel, be careful not to delaminate the fiberglass.
- Ensure the I-beam has cleared the bottom and top section.

30) Use the hammer block to ensure the panel is fully engaged in the I-beam. Gently strike the **center** of the block and ensure the block is continuously in contact with the panel edge. (Figure 74)

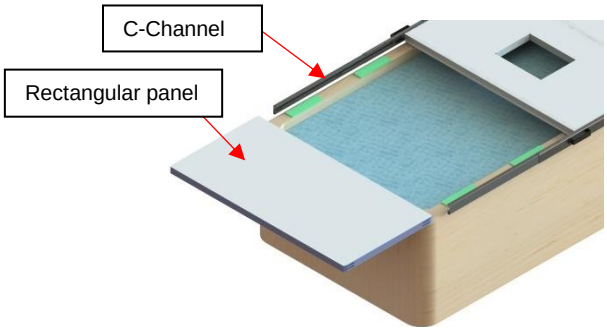


Figure 73

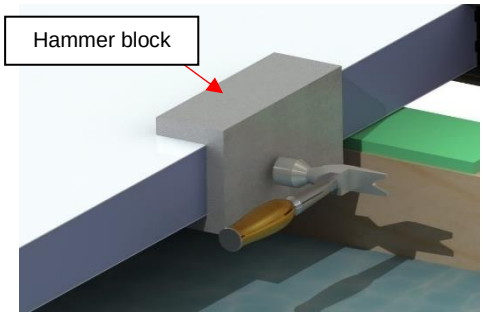


Figure 74

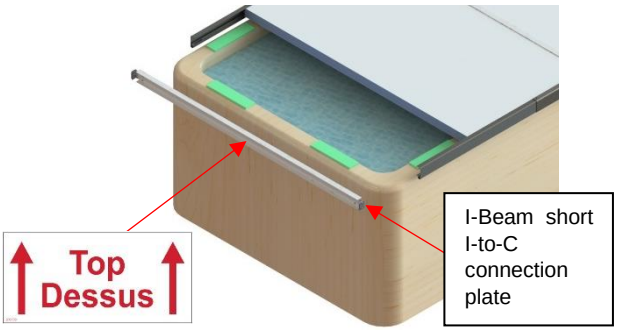


Figure 71

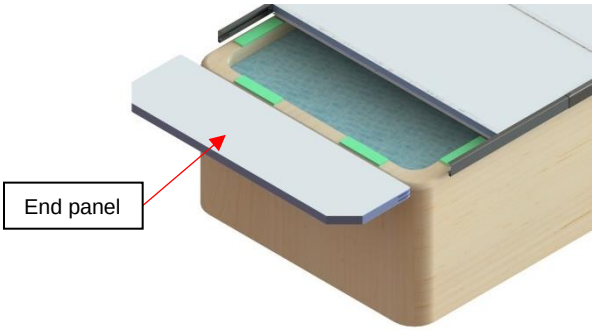


Figure 72

31) Repeat steps 26 to 30 on the other side.

32) If necessary, use the ratchet straps to properly lock in the foam panels.

⚠CAUTION

- Use cardboard or a non-abrasive material to protect panels while using ratchet straps.

⚠WARNING

- Do not over tighten the straps. Over tightening might permanently damage the sealing components of the I-Beams and allow for water infiltration. Tighten slowly and stop as soon as holes align.

33) Insert the corner bracket on the tapered part of one end panel. Use the provided Robertson sheet metal #8 x 3/4" screws on the inside hole. **The two remaining holes will be used later** (Figure 75).

⚠ WARNING

- Do not overtighten the screws as they might break.

34) Snap on the remaining side C-channels, 83" (210 cm) at one end of the cover. It is recommended to slightly engage the top flange before the bottom when sliding the C-channel onto the foam panel (Figure 76).

35) Screw in the Robertson sheet metal #8 x 3/4" screw in the inner hole of the corner bracket reinstall the (Figure 76).

⚠ WARNING

- Do not overtighten the screws as they might break.

36) Orient the corner cover piece and screw it in completely with the last two screws on the side toward the center of the cover. Use the Robertson sheet metal #8 x 1/2" screws. (Figure 77)

⚠ WARNING

- Do not overtighten the screws as they might break.

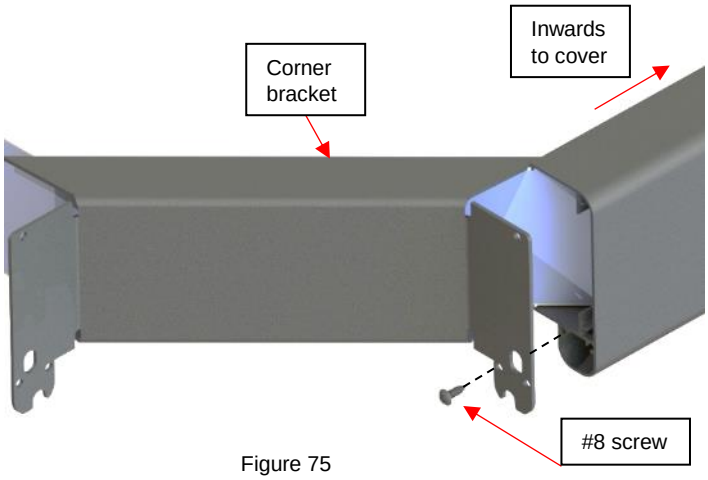


Figure 75

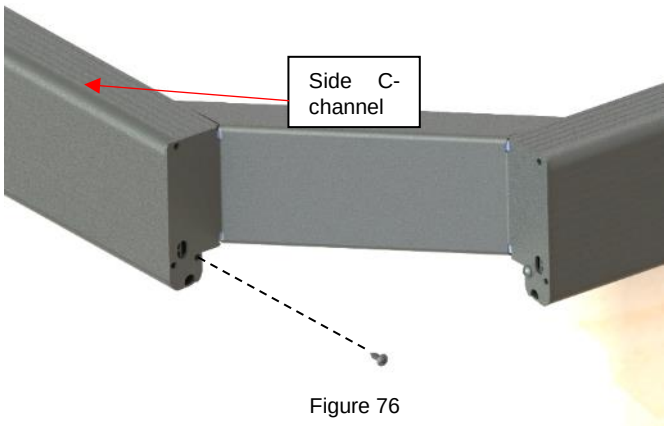


Figure 76

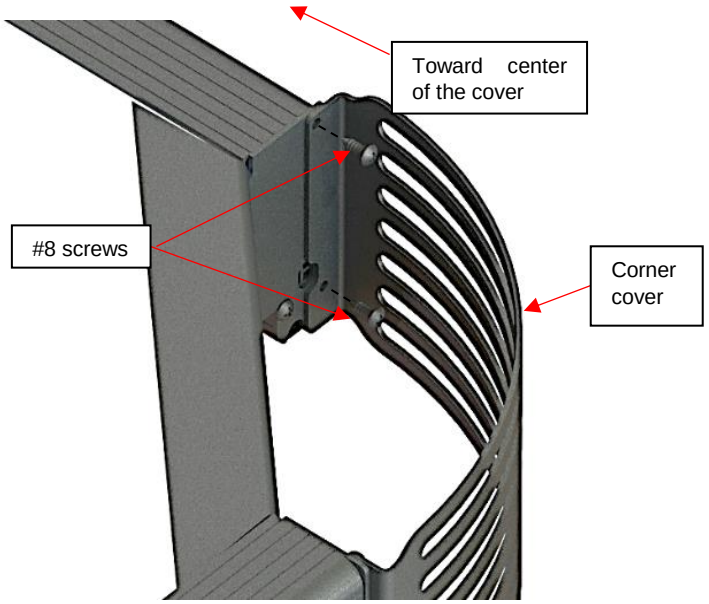


Figure 77

37) Fasten the Robertson sheet metal #8 x 3/4” screws that hold the side C-channel (Figure 78).

Note: If the gap between the corner bracket and side C-channel is too large, try bringing the two parts closer by hand before fully screwing.

⚠ WARNING

- Do not overtighten the screws as they might break.

38) Repeat steps 33 to 37 for all four corners.

Note: The Side C-channel will be already in place from the opposite sides when installing the other corner brackets.

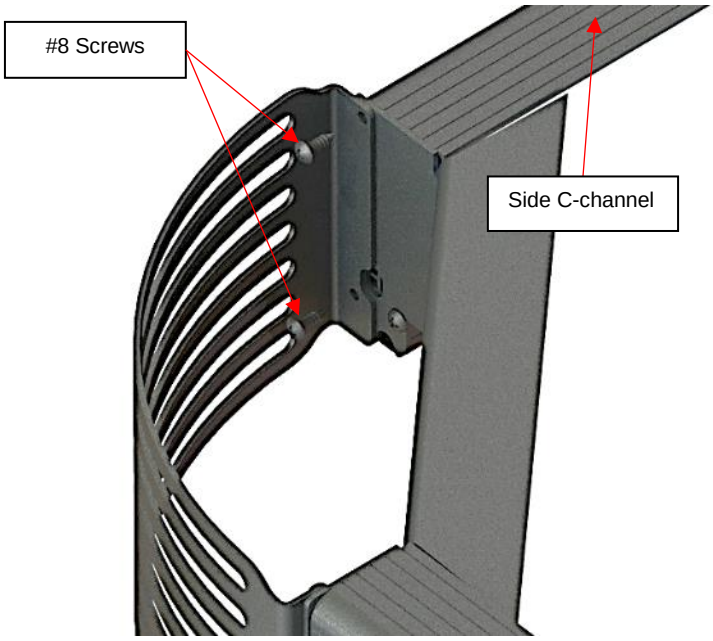


Figure 78

39) Use the provided 5/32” drill bit to drill the holes on the top and bottom of the support bracket (four holes per bracket) (Figure 79 and 80). Use the pre-drilled holes in the support bracket as guidance.

NOTE: Models with long support brackets (approx. 42’’ [1,066 mm]) have eight holes per support bracket.

⚠CAUTION

- Do not drill the foam panel; only drill through the metal.
- Be careful while cleaning holes; metal chips can scratch the painted parts.
- The paint on the aluminum frame is fragile.

40) Screw in the painted Phillips 10-24 x 1/2” thread cutting screws at the bottom and top of the support bracket (four screws per bracket) (Figure 81).

NOTE: Models with long support brackets (approx. 42’’ [1,066 mm]) have eight screws per support bracket

41) Repeat steps 39 and 40 for all four support brackets.

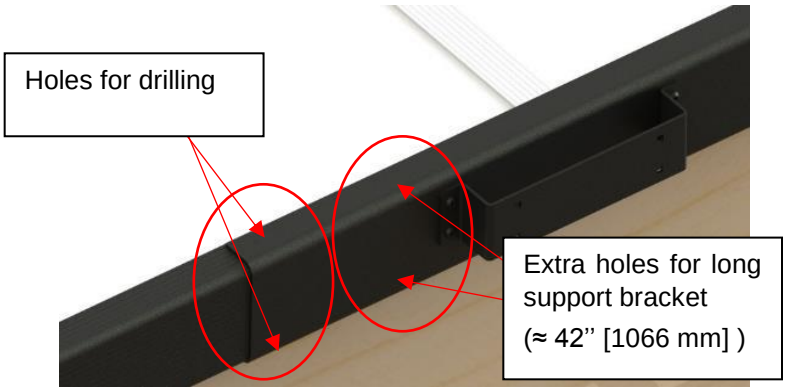


Figure 79

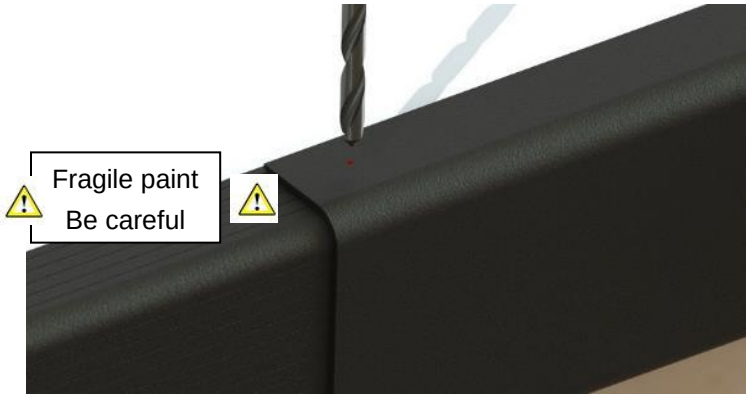


Figure 80

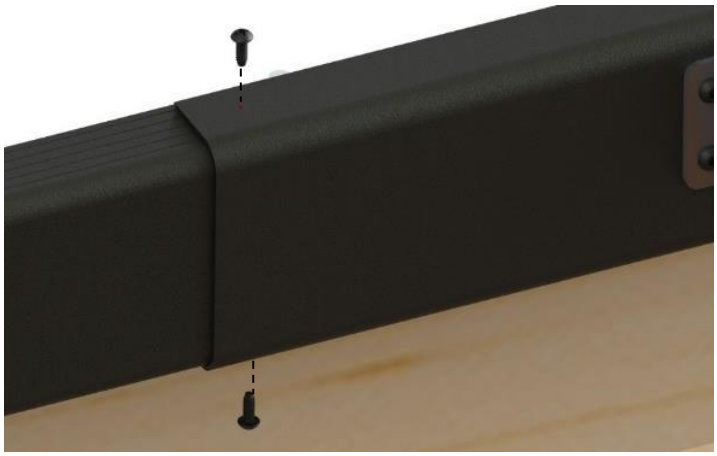


Figure 81

42) Turn the escape hatch handle to retract the arms and install it into the escape hatch opening of the center panel (Figure 82)

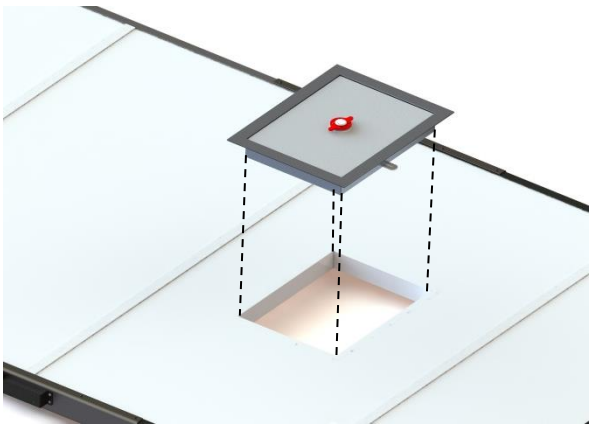


Figure 82

⚠CAUTION

- Verify the functionality of the escape hatch's release mechanism prior to installation and before use. Please ensure that the hatch's arms are retracted when open and non-retracted when closed (Figure 83).

⚠WARNING

- Failure to install the escape hatch properly may impede the performance of the COVANA cover, such as vapor leakage, water infiltration and unwanted access to swim spa.
- All security risks such as drowning, injury or undesired entry due to an open COVANA cover without an escape hatch installed are not approved by COVANA and product certification will be void.

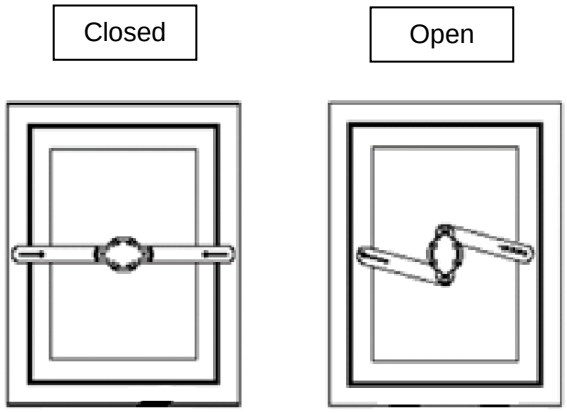


Figure 83

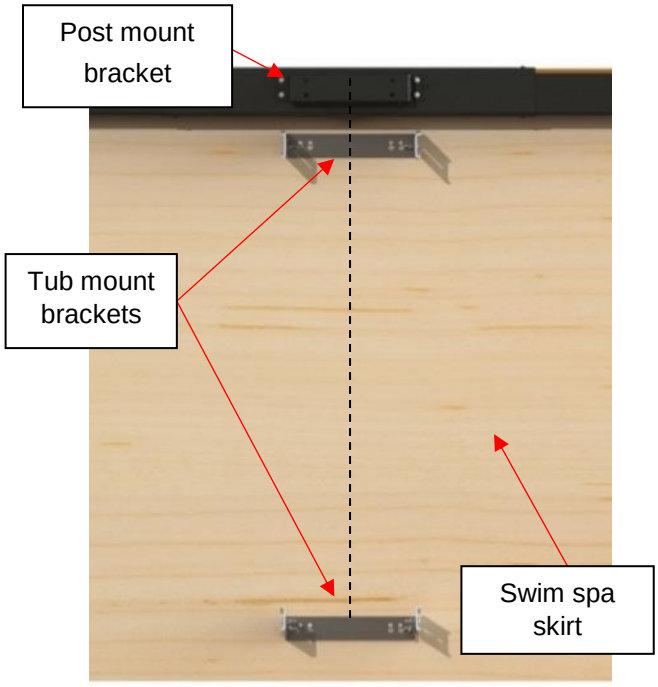


Figure 85

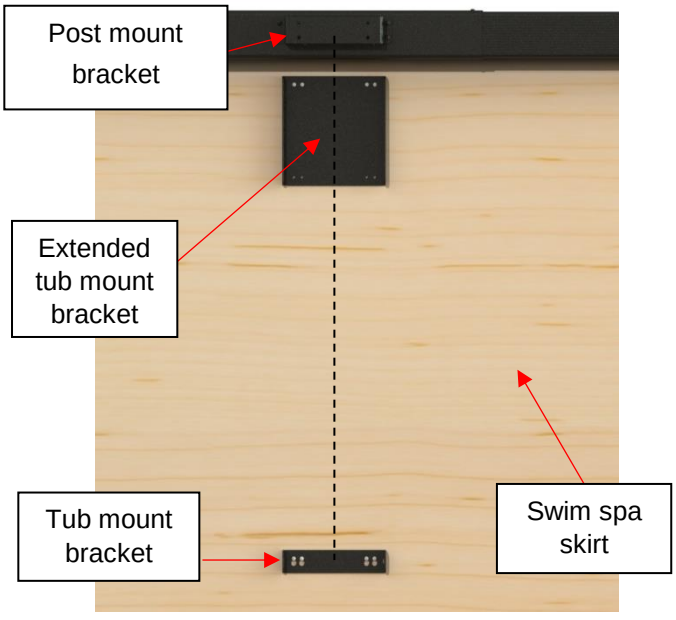


Figure 84

Lifting mechanism assembly

1) Ensure that the cover is centered on the swim spa. The use of a measuring tape is required to reference your measures on all four sides.
2) Install the top and mount bracket arms on one of the sleeves (Figure 86). Gently place the sleeve on the ground so it's in contact at the top with the post mount bracket (Figure 87). Make sure it is straight. With the sleeve and its arms, choose the position of the tub mount bracket. Put the top tub mount bracket 1/4" from the acrylic of the swim spa. Position the bottom one so the arms are as horizontal as possible.

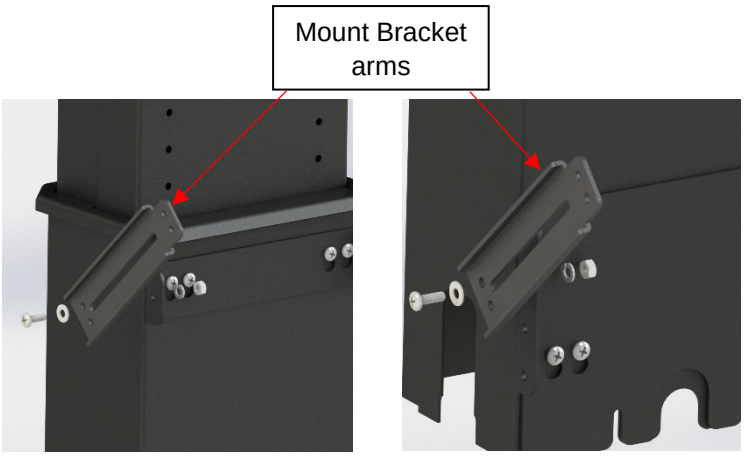


Figure 86

3) Fasten the tub mount brackets properly and strongly to the swim spa's frame (Figure 86). If the swim spa is over 54" high (137 cm), install the extended tub mount bracket (Figure 87). Use the provided Phillips #10 x 3/4" screws for fastening.

Note: Use measuring tape to center the tub mount brackets and/or extend tub mount bracket with the post mount bracket (Figures 84 and 85).

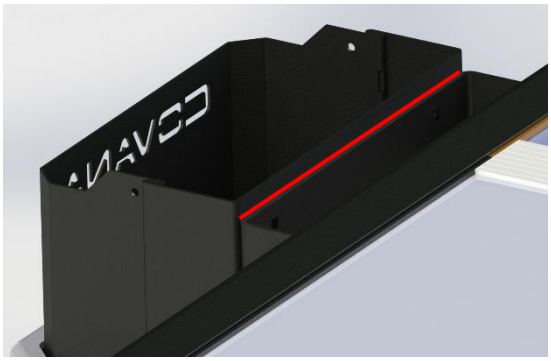


Figure 87

⚠WARNING

- Fastening the tub mount brackets and/or extended tub mount brackets to soft/fragile engineered wood, MDF panels, plastic skirting or any composite siding is not approved by COVANA and is not safe for operation.
- Improper fastening to the swim spa's frame can result in serious injury or even death when the cover operates. COVANA is not responsible for any improper fastening.
- Ensure the screws of the tub mount brackets (and/or extended tub mount bracket) are installed on a solid part of the swim spa's frame.

Note: If the swim spa has a metal frame, the provided screws for the mounting brackets will need to be replaced with self-tapping screws.

4) Position the jacks in their locations. Motorized jacks should always be on the left side when looking at the swim spa. (Figure 88)

NOTE: Position the non-motor jack with the bonding lug (Figure 90) on the same side where the control box will be installed. *Refer to the "Wiring Diagram" in the appendix*.

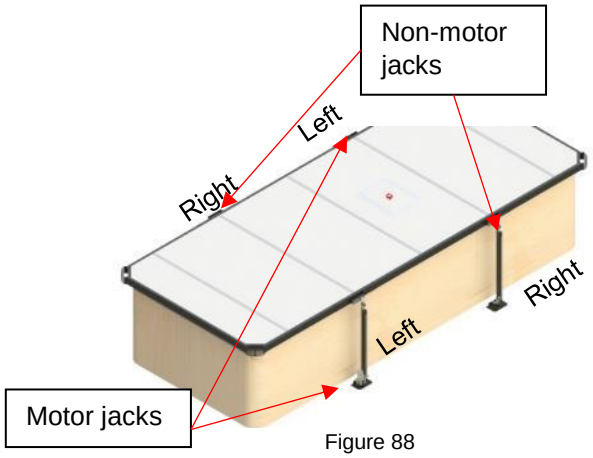


Figure 88

5) Slide the drive shaft over the square shaft of one motor-side jack (Figure 89)

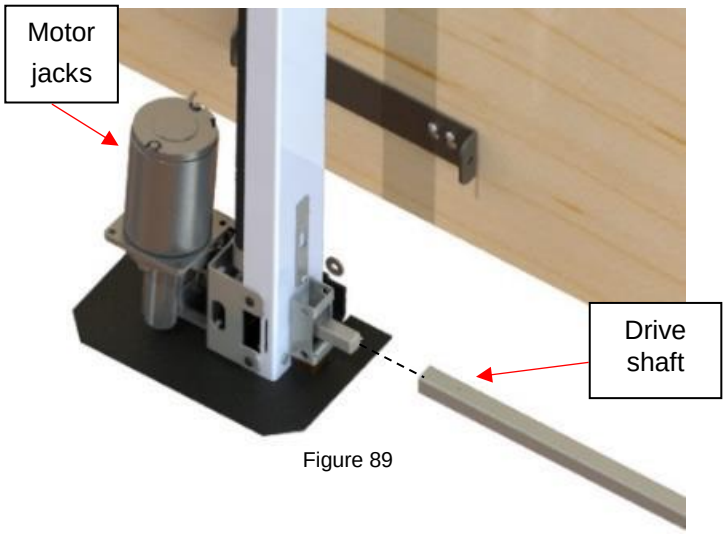


Figure 89

6) On the same swim spa side, install the drive shaft onto the non-motorized jack's shaft (Figure 91)

Note: If drive shaft does not line up with non-motorized jack's shaft, the use of a 3/4" (19 mm) wrench or adjustable wrench can help. Slightly rotate the shaft as shown in Figure 91.

⚠WARNING

- While installing the drive shaft, check if it has not been pulled out from the opposite side when manipulating the part.
- Do not twist the motorized jack with the wrench. This jack contains a gearbox which could break when stressed from the output.

7) Repeat steps 5 to 6 for the opposite side.

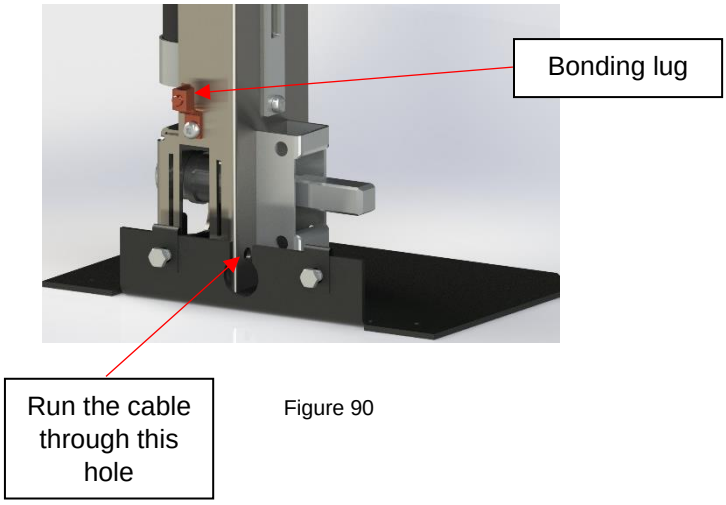


Figure 90

8) Install the aluminum U-frame over the drive shaft. The U-frame will bolt on top of the post bracket of the motor and non-motor jacks. Fasten in place using the hardware provided: four hexagonal 5/16-18 x 2” bolts and 5/16-18 nylon insert locknuts. Use a 1/2” (13 mm) socket wrench and spanner (Figure 92).

9) Repeat step 8 for the opposite side.

10) Check if the drive shaft is still engaged at both ends. Slip your fingers under the U-frames to do this operation.

11) Once the U-frames are installed, the jack lock bracket located at the top of non-motor side jacks can now be removed safely. Remove the M8 x 35 mm bolt and **reinstall it in the hole next to it so you don’t lose it.** Remove the screw on both non-motor jack. You can remove the red tags on the non-motor jacks (Figure 93).

Figure 91

⚠WARNING

- Failure to properly engage the drive shaft will cause the non-drive jack to elevate by itself.
- Failure to remove this part will break the lifting mechanism.

12) For both motorized jacks, locate electric cables that are found in the parts boxes.

Note: The shortest cable goes on the side where the control box will be located. *For the AC-operated model*, position the AC control box so it’s protected from direct sunlight.

Figure 92

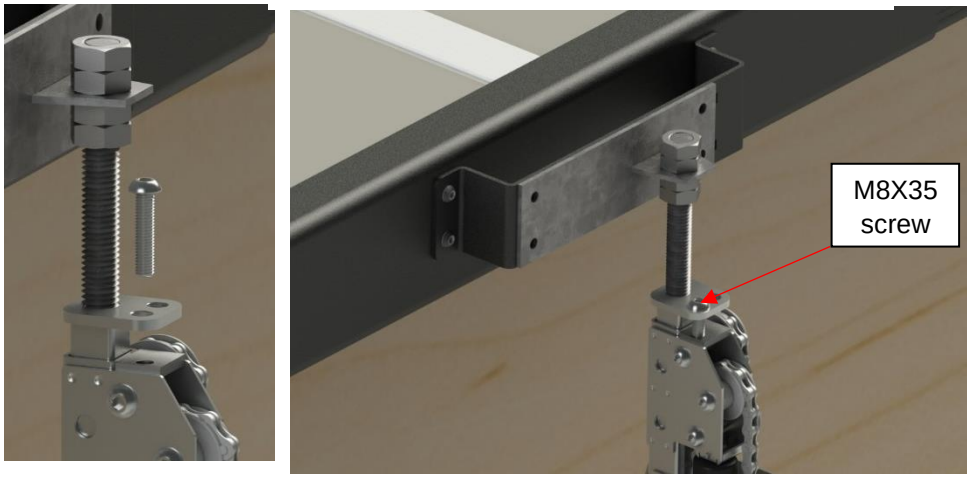


Figure 93

13) Locate the short end of the cable, which can be identified from the metal compression connector near the end of the cable. Make the connector go through the center hole on the back of the motor jack's base plate. Connect the cable to the motor harness and tighten the screws of the compression connector onto the base. **The screws of the compression connector should be oriented horizontally.** You might have to rotate the connector as shown on Figure 94. Let the remainder of the cable pass near the U-frame. The electrical hook-up will be explained further. When connecting the motor harness, you must hear a CLICK from the connector to confirm you have properly installed it.

⚠WARNING

- Ensure the proper orientation of harnesses when trying to plug in the motor. Failure to properly clip on harness will cause damage to electrical circuit.

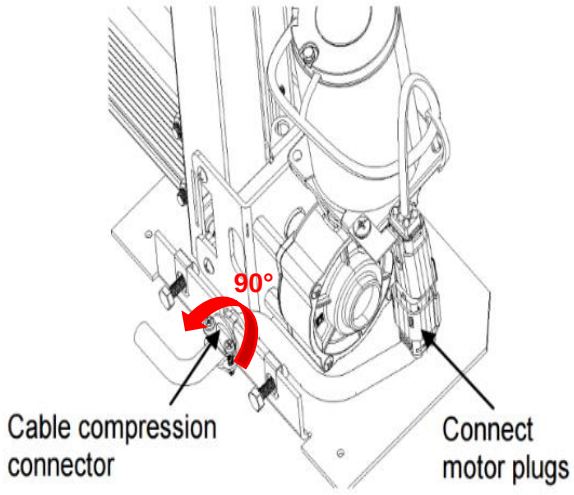


Figure 94

14) Repeat step 13 for the second motorized jack.

15) The jack adapter located at the top of the jack can be adjusted by turning the large threaded rod. Adjust the height so that they match the cover mount bracket holes. Use the adjustable wrench 15/16” (24 mm) head. Repeat this step for all four jacks (Figure 95).

⚠WARNING

- The threaded rod must not be unscrewed more than **14 inches (35 cm).** (Measure the length from the top of the threaded rod nut to the top of the bottom nut (Figure 95).)
- Further unscrewing is not considered safe and is not recommended by COVANA.
- Failure to follow these guidelines could cause serious injury.

16) Slide the sleeves over the top of the jacks and fasten them using the 1/4”–20 x 3/4” carriage bolts at the top with 1/4” lock washers and 1/4-20 nuts. Use a 7/16” (11 mm) socket and spanner. Repeat this step for all four jacks (Figure 96).

⚠CAUTION

- When sliding the sleeves over the jacks, ensure the slot at the bottom of the outer sleeve is going to slide over the U-frame that covers the drive shaft. There are right and left models for sleeves (Figure 97)
- Handle the sleeves with care to prevent them from being scratched otherwise damaged.

17) Tighten 1/4-20 hexagonal bolts at the bottom of all the sleeves bases. (7/16” (11 mm) socket wrench) ensure that the washer is outside of the outer sleeve. This will ensure the sleeve is held correctly (Figure 97). Repeat this step for all four jacks.

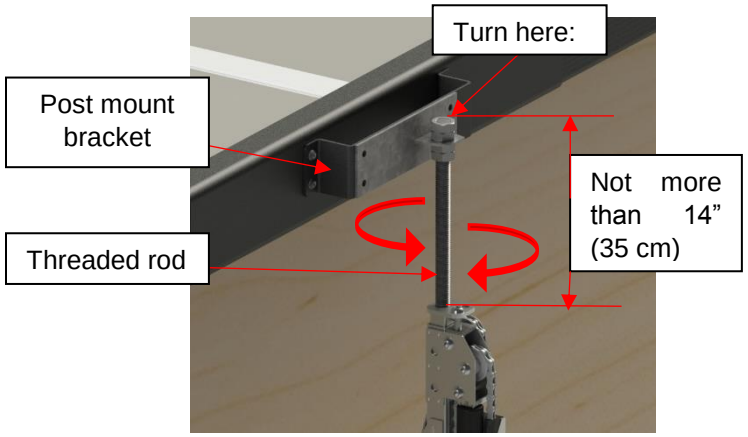


Figure 95

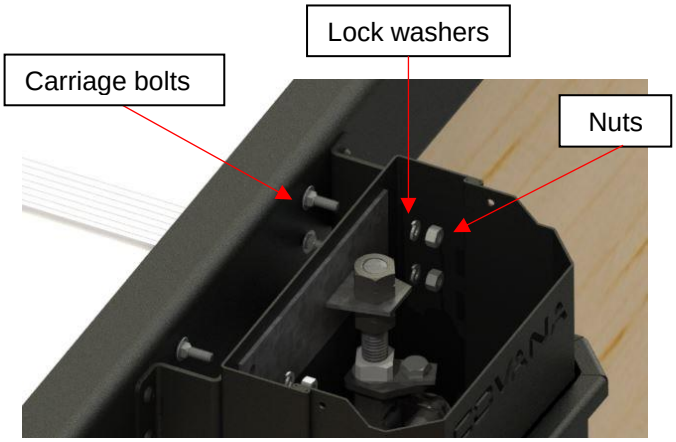


Figure 96

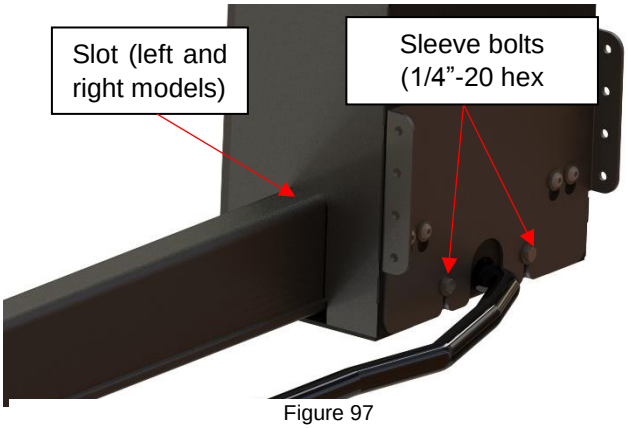


Figure 97

18) Use a level to ensure that the four posts are vertically level.

19) Attach the **top** mount bracket arms to the tub mount brackets using the 1/4-20 x 1” hex drive bolt, 1/4” flat washer on the outside. Use a 1/4 lock washer and 1/4-20 nut on the inside. Use a 5/32” (4 mm) drive and 7/16” (11 mm) spanner (Figure 98 and Figure 99)

⚠CAUTION

- The rounded section of the bracket should always be mounted on the swim spa side.

20) Just as with the top brackets, attach the **bottom** mount bracket arms to the tub mount brackets using the 1/4-20 x 1” hex drive bolt, 1/4” flat washer on the outside. Use a 1/4” lock washer and 1/4- 20 nut on the inside. Use a 5/32” (4 mm) drive and 7/16” (11 mm) spanner (Figure 98 and Figure 99)

21) Repeat steps 19 to 20 for all four posts.

22) Check if the posts are still level on both axes. If not, unscrew the mount arms and reposition the sleeves. Use the outer sleeve as a reference. Use the 48” (122 cm) level (Figure 100).

⚠ WARNING

- Failure to properly level the posts could cause aesthetic damage, even mechanical damage or malfunction.

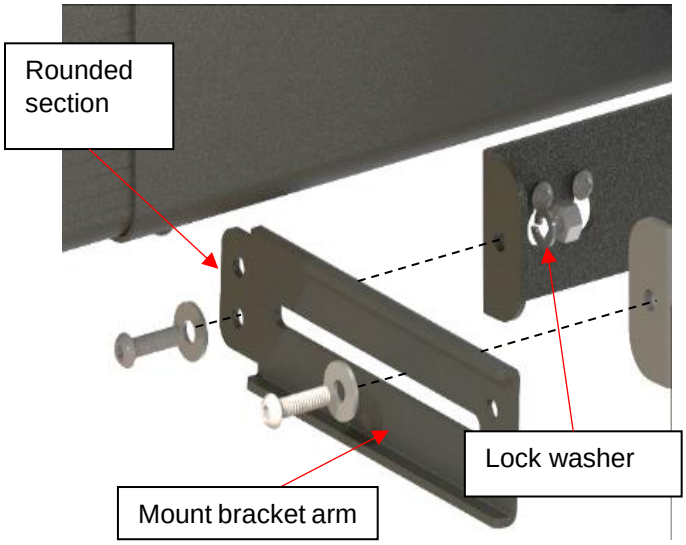


Figure 98

Figure 99

Figure 100

23) Attach the top plate cover for all four posts. Use the provided Robertson #8 self-drilling screws x 1/2” (2 screws per post) (Figure 101)

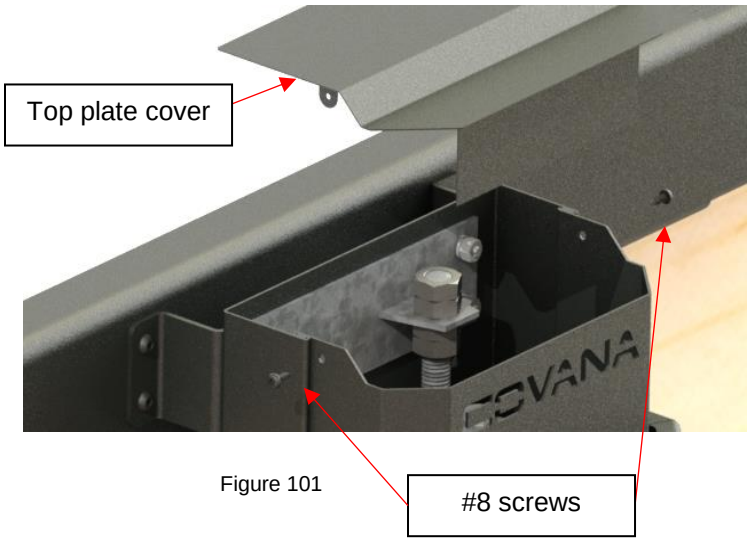


Figure 101

24) For all four posts, slide the all-weather seals down. Ensure they are properly seated on the outer sleeves’ base. Push down on the seal as shown (Figure 102)

Note: The black seal flap of the all-weather seal should be facing downwards when pushing it down.

⚠ WARNING

- Improper installation of the all-weather seal could result in unwanted performance and reduce the lifespan of the mechanical lifting components.
- Improper installation of the all-weather seal might cause damage to the lifting mechanism.

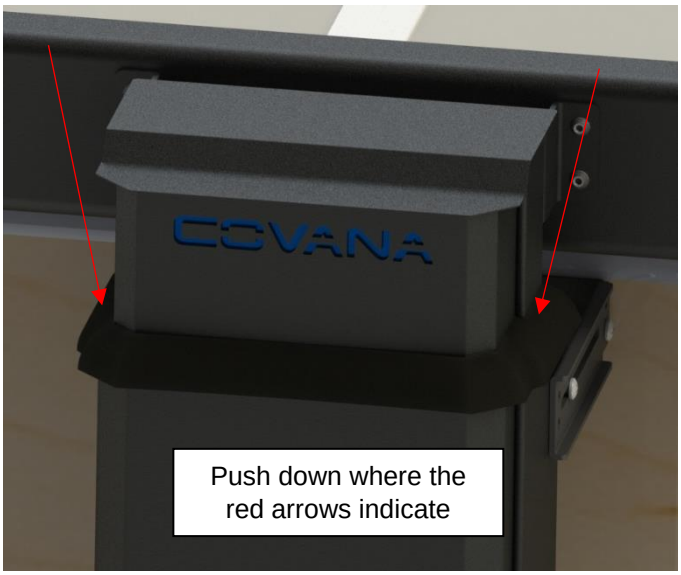


Figure 102

ELECTRICAL HOOK-UP

Avoiding the risk of electrocution

⚠ CAUTION

- All electrical work should be done by a qualified electrician, otherwise the certification and warranty will be voided. Furthermore, any modifications to the electrical components will also void the warranty.

⚠ ELECTRICAL DANGER

- Failure to comply with these instructions may result in death by electrocution or serous injury. Disconnect or turn off and secure all power supplies before starting any intervention on the COVANA cover.
- For *AC-operated model*: A disconnect mean needs to be incorporated into the fixed wiring at the time of installation. This mean must be accessible to the user or service technician to turn the power off for future maintenance or repair.
- Always have a licensed electrician contractor perform any electrical maintenance or repairs on the COVANA cover. The wiring must comply with all applicable electrical codes and regulations.
- *For AC-operated model*: The COVANA AC control box must be connected to a circuit that is protected by a dedicated Ground Fault Circuit Interrupter (GFCI) that complies with all applicable local electrical codes and regulations.
- Install the COVANA cover in such a way that drainage directs water away from the electrical components and base mechanical components.
- Do not connect any auxiliary components to the electrical system of the COVANA cover unless they have been approved by COVANA.
- Replace electrical components with original components provided or approved by COVANA. Ask your dealer for replacement parts.
- To reduce the risk of electric shock, replace a damaged cable immediately. Failure to do so may result in death or serious personal injury due to electrocution.
- Do not bury any cables. A buried cable may result in death or serious personal injury due to electrocution if direct burial-type cable is not used, or if improper digging occurs.

⚠ ELECTRICAL WARNING

for AC-operated model

- To reduce the risk of electric shock, the green-colored terminal or the terminal marked “g,” “gr,” “ground,” “grounding” or with a ⏚ symbol located inside the supply terminal box or compartment must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying the equipment.
- One bonding lug is installed on one non-motor jack. To reduce the risk of electric shock, connect the COVANA cover bonding lug to the local common bonding grid in the area. Use terminals with an insulated or bare copper conductor no smaller than No. 6 AWG (4.11 mm).
- All field-installed metal components, such as rails, ladders, drains or other similar hardware, within 10’ (3 m) of the swim spa must be bonded to the equipment grounding bus with copper conductors no smaller than No. 6 AWG (4.11 mm). (NEC art. 680.)

AC Control box

(for AC-operated model only. If you are installing a battery-operated model, skip to "battery and solar panel" section')

1) Place the pre-assembled control box and its holding bracket on one of the U-frames between the two sleeves. (Figure 105)

⚠ Warning

- Choose a side of the swim spa that will allow any maintenance to the box to be easily done but that will also avoid direct and constant sunlight exposure. In some region, the heat from the sun could impede the performance of the controler.
- The AC control box must always be out of reach of anyone in the swim spa. It should be placed at a minimum distance of 4' [1.2m] away from any position in the swimspa.
- The AC control box must be installed in its vertical position. The connectors must face the ground (Figure 105).
- The AC control box connector must be placed at a minimum distance of 5" [127 mm] from ground level.

2) Once in place, a certified electrician should connect the AC control box to a power source following instructions from the Wiring Diagram in the *Appendix* section of the manual.

⚠ WARNING

- A certified electrician must install a conduit connector that will be type 3 enclosure rated (*not included*). The hole diameter on the box is 22 mm (Figure 104). Refer to the *Wiring Diagram* in the Appendix section

3) Start by connecting the two motor jack harnesses to the AC control box (Figure 103). **Use the wires that were connected in step 13 in the *lifting mechanism assembly section***. Put the exceeding wires as close to the swim spa as possible to hide and protect the wires. (Figure 105)

4) Unpack the key switch and plug the harness into the AC control box. (Figure 104)

Optional Emergency battery backup

Note: If you have purchased the optional emergency battery backup kit, it will be in one of the parts boxes. Place the charger in a safe, indoor place. The charger will stop using power once the battery is fully charged so you can leave the battery on the charger.

⚠ *ELECTRICAL WARNING*

The charger must always be indoors, away from water. Damage, injury or death may occur if this instruction is not followed

⚠ WARNING

- The optional emergency battery backup must only be connected when needed. If the battery is left connected to the AC control box, damage to the battery and AC control box may occur.

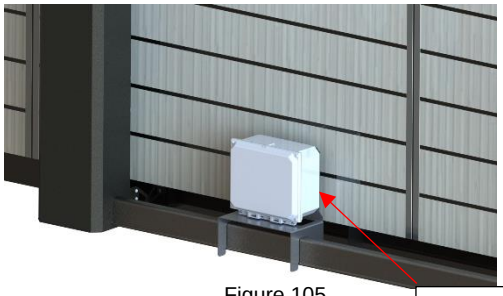


Figure 105

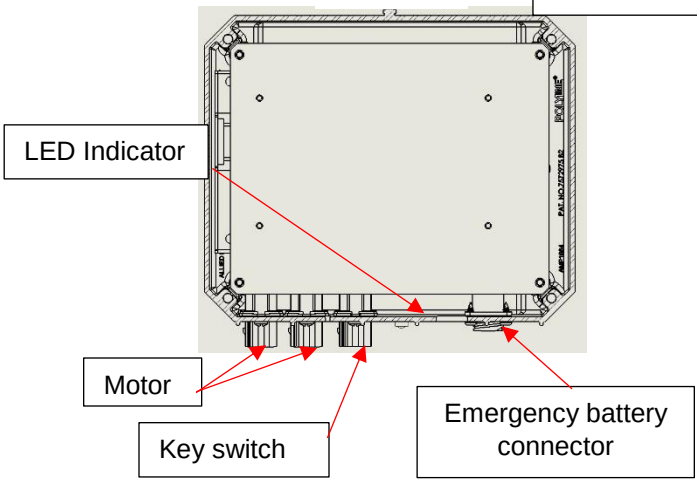


Figure 103

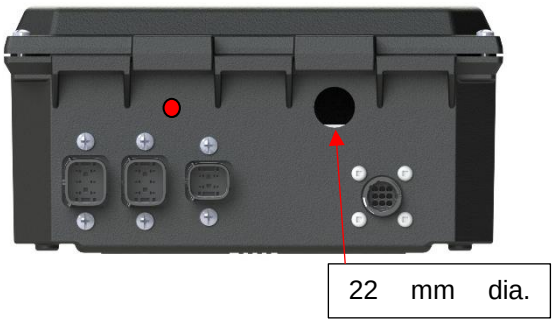


Figure 104

Battery and solar panel

(For battery-operated models only. If you have the AC-operated model, skip to the next section.)

1) Locate the control box housing and control box (Figure 107-108)
2) Start by connecting the two motor jack harnesses to the control box. **Use the wires that were connected in step 13 in the *lifting mechanism section***. Put the exceeding wires as close to the swim spa as possible to hide the wires (Figure 108-109)
3) Unpack the key switch and plug the harness into the control box (Figure 108)
4) Unpack the solar panel kit from boxes and connect the solar panel harness (Figure 108)
5) Install the solar panel on the side of the swim spa that is most exposed to sun, directly onto the panneling of the swim spa, under the acrylic edge.

⚠ ELECTRICAL WARNING

- Do not place the solar panel on the COVANA cover since the wire will hang above water and might cause electrocution.

6) Slide the control box housing onto the U-frame (Figure 109)
7) Place the remainder of the wires as near as possible to the swim spa to hide these cables.
8) Open the control box housings' top and connect the battery harness. The battery is found in the parts boxes. Place the battery inside by opening the top and closing the control box.

Note: A second battery and a charger will also be in the parts boxes. Place the charger in a safe, indoor place. The charger will stop using power once the battery is fully charged, so you can leave the battery on the charger.

⚠ ELECTRICAL WARNING

- The charger must absolutely be indoors, away from water. Damage, injury or death might occur if this instruction is not followed.

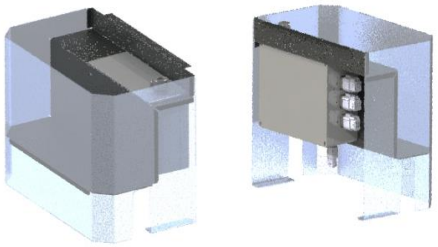


Figure 107

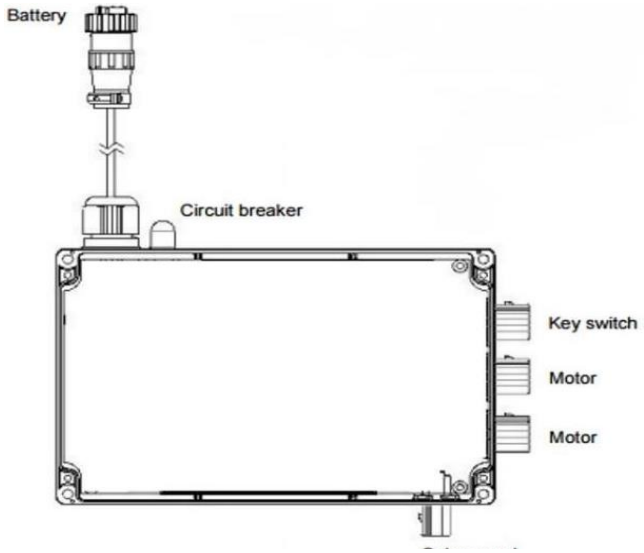


Figure 108

Figure 109

Testing the COVANA cover

- Test the COVANA cover by following the next steps.

⚠ CAUTION

- If the COVANA cover is in an area with limited clearance, never completely lift the COVANA cover while performing this test sequence.

⚠ WARNING

- *For AC-operated models*, all electrical connections must be done by a certified electrician.

1) Ensure there are no objects directly above or in the path of the cover opening while performing this test. If there is, do not fully lift while performing the start-up procedure.
2) Use the key switch to lift it by approx. 8” (20 cm). Make sure the cover is lifted evenly (there are no corners higher than the others).
3) Bring the cover down again and ensure the cover is evenly seated on the pieces of foam all around the swim spa perimeter.
4) Lift the cover halfway up.
5) Check if the middle sleeves are free by sliding them up and down by hand. Test if the middle sleeve slides without scratching or interfering with inner or outer sleeve. If all seems to function properly, lower the cover and check if the sleeves are level using the 48” (122 cm) level on both sides of the sleeves as shown in Figure 100.
6) Lift the cover all the way up (or as high as possible without objects obstructing cover) and pay attention to any abnormal sound (metal grinding or knocking). If so, stop any movement, consult the *Troubleshooting* section and inspect all the systems.
7) Lower the cover and ensure it stops at the zero position and the cover is evenly seated on all pieces of foam around the swim spa.
8) Permanently mount the key switch at least 5 feet (1.5 m) away from the swim spa and 5 feet (1.5 m) above the deck or ground level. Ensure the user has a clear view of the COVANA cover when operating it. (See Figure 32). **Cut the power when installing the key switch.**

⚠ WARNING

- The key switch must be permanently mounted and located 5 ft (1.5 m) away from the swim spa and 5 ft (1.5 m) above the deck or ground level. This ensures the user has a clear view of the COVANA cover when operating it. Furthermore, the key switch terminal should be located in a place where no water downpour or debris could fall on it.
- Failure to properly install the key switch according to these instructions will void the warranty and product certification.

⚠ CAUTION

- When operating, the user must have a clear view at all time of the COVANA cover and its surroundings.

⚠ DANGER

- Failure to properly install the key switch according to these instructions could result in injury or even death.

Wiper brackets installation

Lift the cover halfway up to proceed to the next steps. The next steps are important for minimizing water intrusion.

⚠CAUTION

- For COVANA covers between 12' and 15', there will be 6 wiper brackets. For models 16' to 20', there will be 10 wiper brackets. The number of wiper brackets is determined by the number of I-beams used to assemble the cover.
- Ensure the I-beams are dry and clean.
- Ensure ambient temperature is between 70°F to 100°F (21°C to 38°C) for the ideal application temperature.

1) Locate the wiper brackets that are provided in the plastic bag (Figure 110).
2) Peel back siding of the double-sided tape of one wiper bracket (Figure 110).
3) Under the cover locate an I-beam and orient the wide flap of the wiper bracket outwards of cover (Figure 111).
4) Stick the wiper bracket on the middle of the I-beam by holding it in place with pressure for at least 60 seconds. This ensures a proper bond to the I-beam. **Make sure you place the wiper bracket flap at the edge of the I-beam directly into the gap between the I-beam and the C-channel** (Figure 112)

⚠WARNING

- Failure to properly install the wiper bracket impedes performance.
- Failure to install each wiper bracket properly can result in excessive cover leakage.

5) Repeat steps 1 to 4 for all I-beams on the left and right sides.

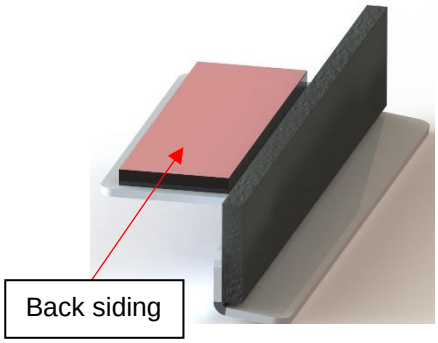


Figure 110

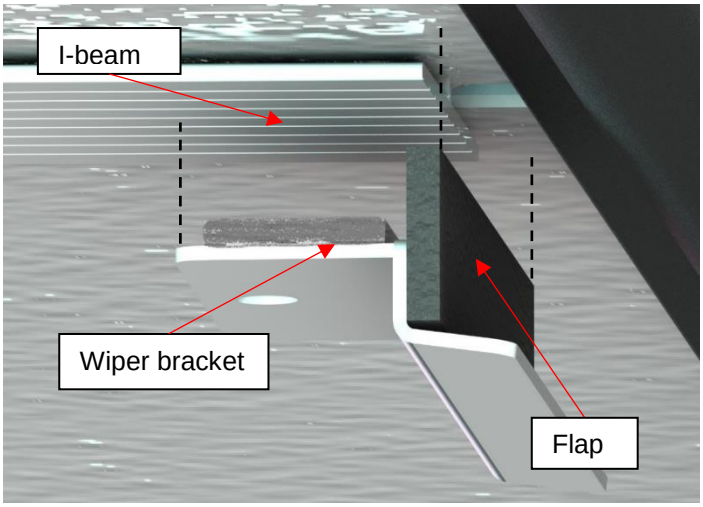


Figure 111

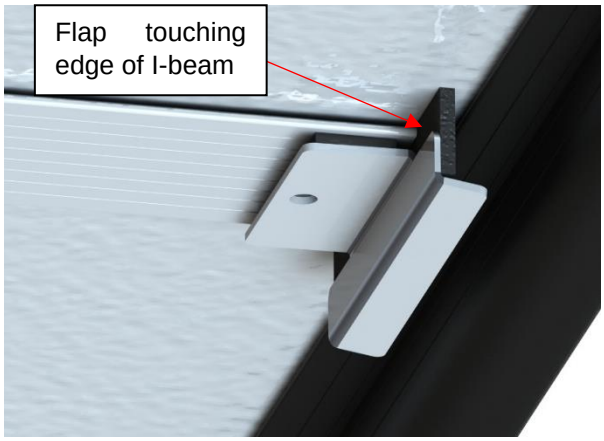


Figure 112

Seal application

1) Once the COVANA cover has been fully assembled, raise the cover and remove the foam spacers and tape. Lower the cover and walk around the entire perimeter of the swim spa, observing where the inside surface of the cover will make contact with the swim spa. This will determine the best location to apply the seal.
2) Dry the swim spa edge and the underside of the cover with a clean cloth.

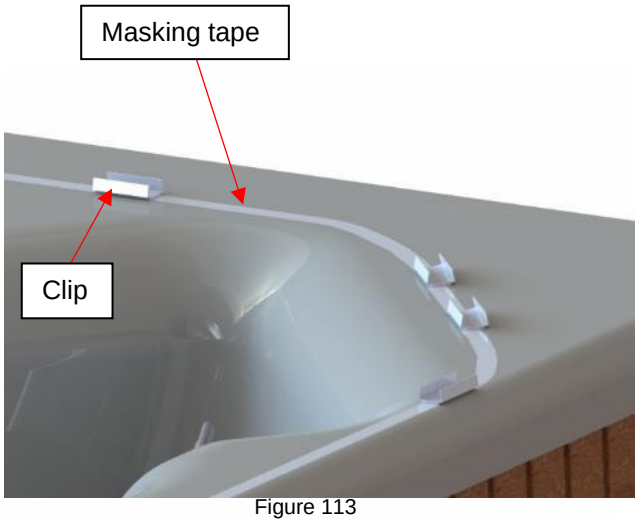


Figure 113

3) Apply the provided masking tape around the swim spa where the seal will be installed. The masking tape will ensure the seal is straight when pulled corner to corner. The ideal location for the seal is closer to the swim spa's interior edge, but on a flat surface (Figure 113). The minimum turn radius for the seal is 4" (10 cm).

⚠ WARNING

- The use of masking tape is recommended since it will protect the acrylic tub from the clips' glue. Furthermore, pulling the masking tape from one corner to the next will ensure straightness.

4) Apply the provided seal clips parallel to the masking tape around the swim spa and make sure there is more in the corners and on any tight turns (around filters, etc.). Keep in mind that a limited number of clips are provided. Install two clips where the seal joint will be located (Figure 113).
5) Start installing the seal joint at the opposite side from the entrance of the spa (halfway in a clip), with the adhesive layer facing up toward the cover (Figure 114 and Figure 115)

Figure 114

⚠ CAUTION

- Do not install the seal joint near a control system or the critical components of the spa.

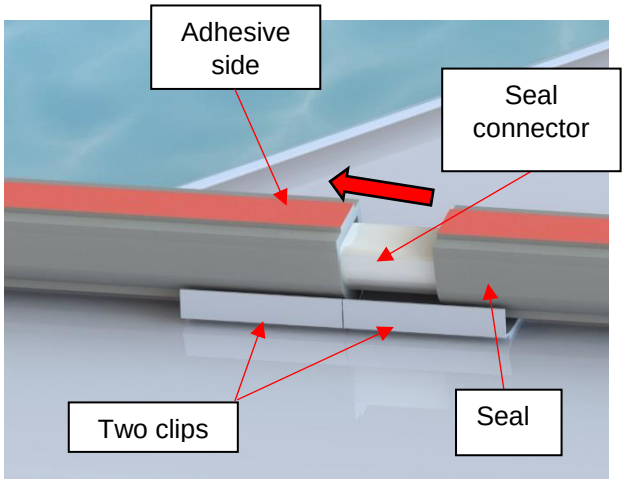


Figure 115

6) When the seal is installed around the entire swim spa, you must cut the extra length as straight as possible for the best joint finishing results.

7) Use the supplied seal connector and insert it in both ends of the seal. The use of masking tape to hold the two ends tightly together is recommended (Figure 115).

⚠ WARNING

- At this point, if the ambient air temperature is below 32°F (0°C), a temporary heater must be placed inside the swim spa for 10 to 15 minutes. Once the heater is in the swim spa, lower the cover until it touches the seal to increase the air temperature. After 10 to 15 minutes, remove the heater and continue with the seal installation. The rubber seal should not be overheated; the maximum temperature it can withstand is 302°F (150°C). Do not directly heat the acrylic and seal, as this may cause permanent damage. Do not place the heater too close to the acrylic surface, as the surface could melt or catch fire. Place the heater on a pedestal or spacers to not directly place the heater on the acrylic tub.

8) Test the seal placement by lowering the cover about ¼" (6 mm) over the seal to ensure that the entire perimeter **will make contact** with the seal. If you are satisfied, raise the cover and remove the red plastic backing off the seal.

⚠ CAUTION

- Remove all dirt, oil and moisture for proper seal adhesion. The use of mild detergent can help clean the surface. Refer to the swim spa manufacturer's recommendation Ensure the seal stays tightly in the clips to ensure its proper positioning.

9) Completely lower the cover onto the seal. Leave the cover in this position for **at least 5 minutes** to ensure proper seal-to-cover adhesion.

⚠ WARNING

- At least **5 minutes** are necessary to ensure the proper adhesion of the seal at 70°F (21°C). Less than **5 minutes** could cause the seal to detach from the cover after a short period of time.

10) Slowly raise the cover no more than a 1/4" (6 mm) and leave the cover in this position for about 10 seconds, as this will allow the seal to slowly and fully release from the seal clips. You can also use a non-abrasive plastic tool or your fingers to help release the seal.

11) Once satisfied that the seal is released, raise the cover 36" (91 cm) high. Apply pressure on the seal to properly bond the adhesive to the underside. To apply pressure to the seal, simply push it against the COVANA cover with your hands.

12) Remove the seal clips and tape from the tub's edge.

13) Completely lower the COVANA cover and leave it there for **at least another five minutes.** This will ensure the seal is properly bonded.

⚠ WARNING

- At least **5 minutes** are necessary to ensure the proper adhesion of the seal at 70°F (21°C). Less than **5 minutes** could cause the seal to detach after a short period of time.

14) Raise the cover again at approx. 6" (15 cm) and stop.

15) Ensure the cover is flat and there are no corners higher than the others.

16) Lower the cover again, and ensure the seal is touching the swim spa all around and there is no steam leaking.

17) Lift the cover all the way up and pay attention to any unusual sounds (screeching or knocking). If so, refer to the *Troubleshooting section*.

18) Lower the cover completely; the seal installation is done.

Upper limit reset of posts

Should there be an object that will obstruct the COVANA cover during operation, please follow the next steps to reset the maximum height of the cover.

If not, please skip to step 17 in the section below.

- Use the key switch to perform the following steps without interruption during the sequences.

⚠WARNING

- When following the next steps, the cover will ignore its upper limit. This means the mechanism can break if elevated too high.

1) The cover must be lowered to zero position. (Seal touches equally around swim spa perimeter.)

2) Disconnect both motors (remove motor plug harness from the control box).

3) Disconnect the battery. *If you are installing the AC-operated model*, wait until the LED turns off to proceed to the next step.

4) Reconnect battery. (*Ignore the step if you have a AC-operated model*)

5) Using the key switch, turn UP (counter clockwise) and hold for at least 10 seconds.

6) Release the key.

7) Turn the key UP (counter clockwise) 10 times within 10 seconds.

8) Look at the control box's LED. If the LED is flashing about once every 3 seconds, the reset process was successfully initiated.

9) You have 30 seconds now to reconnect the motors and set the upper height limit of the cover. Use the key switch to raise the cover.

Note: Every time that the height of the cover is changed, the 30-second countdown will restart. If that period of time is exceeded, you will exit reset mode.

10) Raise the cover to the desired height.

⚠WARNING

- Do not exceed 120" (3 m) from the bottom of the sleeve to under the cover. Refer to *Side elevation* section for more information.

11) Once satisfied with the cover height, disconnect the battery again. *If you have a AC-operated model*, leave it there until the LED turns off. This is required to save the upper limit position.

12) Reconnect the battery. This is required to reboot the system. (*Ignore the step if you have an AC-operated model*)

13) Lower the cover to its zero position.

14) The initialization process was completed for the cover. This memorizes the upper limit of the COVANA cover.

15) Test the system by raising the cover. Check if the cover has saved the upper limit height.

16) Lower the cover to zero position.

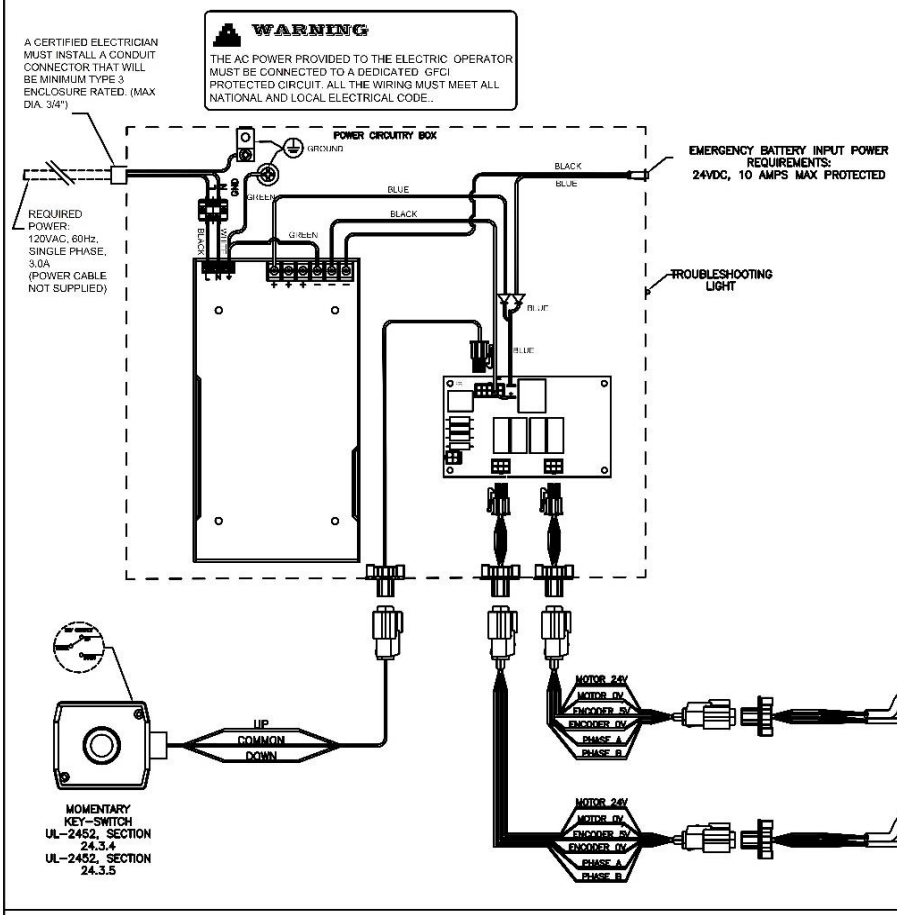
17) **Please consult the last pages of this manual. There will be a checklist for the installer and the customer. Please check the sections to ensure everything was done properly. It is very important to sign both copies and tear off the installer's copy.**

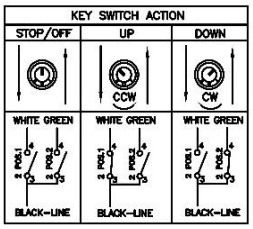
APPENDIX

Wiring & Schematic Diagram - 120VAC, 60Hz AC Control Box (North America)

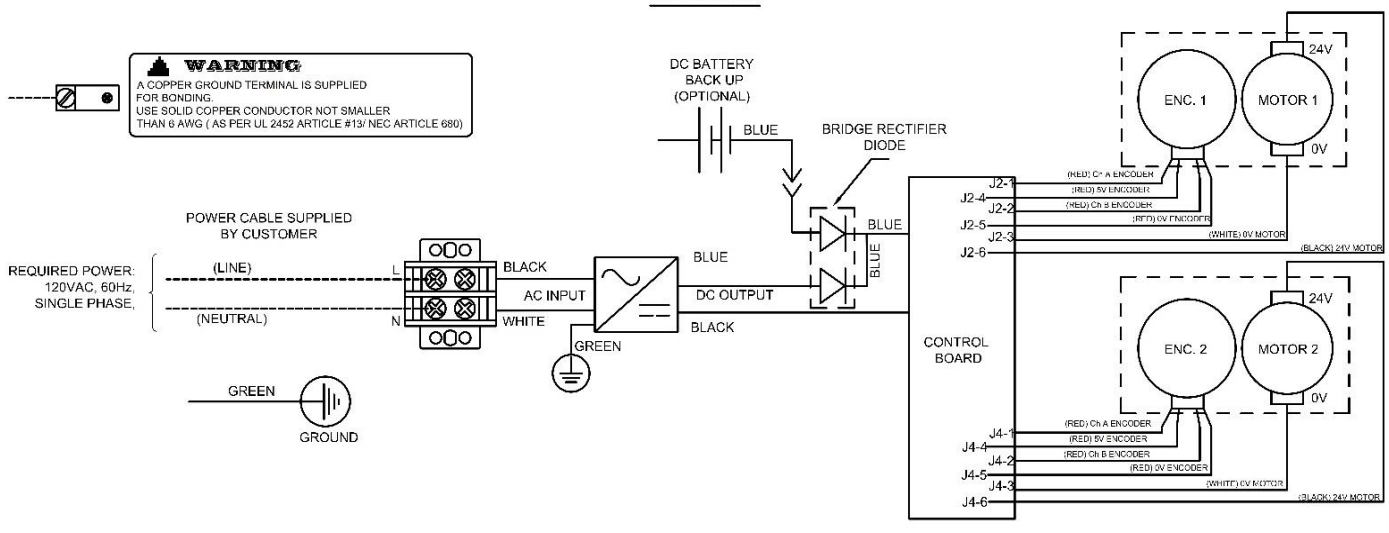
Operating and circuit logic operation

- 120 VAC, 60Hz control circuit.
- Constant pressure on UP and DOWN.
- Key-switch 3-position.
- Up position - raises the spa cover to up position.
- Down position - lowers the spa cover to low position.
- OFF position - disables the controls.





SCHEMATIC



The control circuit operates at 120VAC, 60Hz. Due to the resistance in the wire used to carry the control circuit voltage, it is important to use the appropriate wire size between the AC control box and the main power supply.
If wire gage is not suitable for the distance, problems in AC control box will be encountered such as motor humming, premature wear of the power supply and possible tripping of it's thermal protection.
The Covana AC control box connections should be performed by a qualified electrician. The conduit size selection, the power wires selection and their installation must be done in accordance with all local regulation and National Electric Code (NEC), Article 430.

Wiring & Schematic Diagram – 220VAC, 50Hz control box (Europe only)

- See inside control box

TECHNICAL SPECIFICATIONS

Side elevations

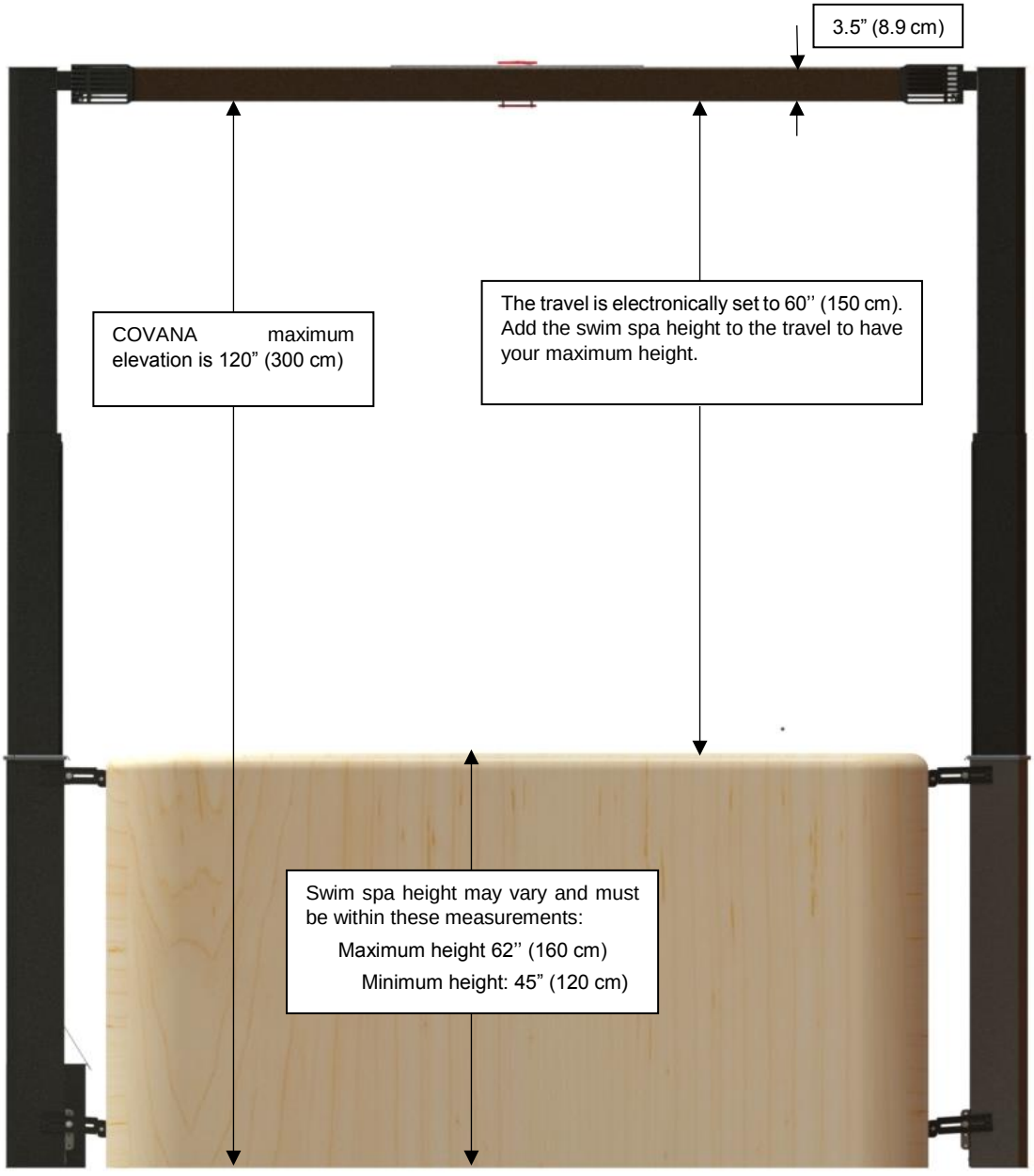


Figure 116

Frame and footprint

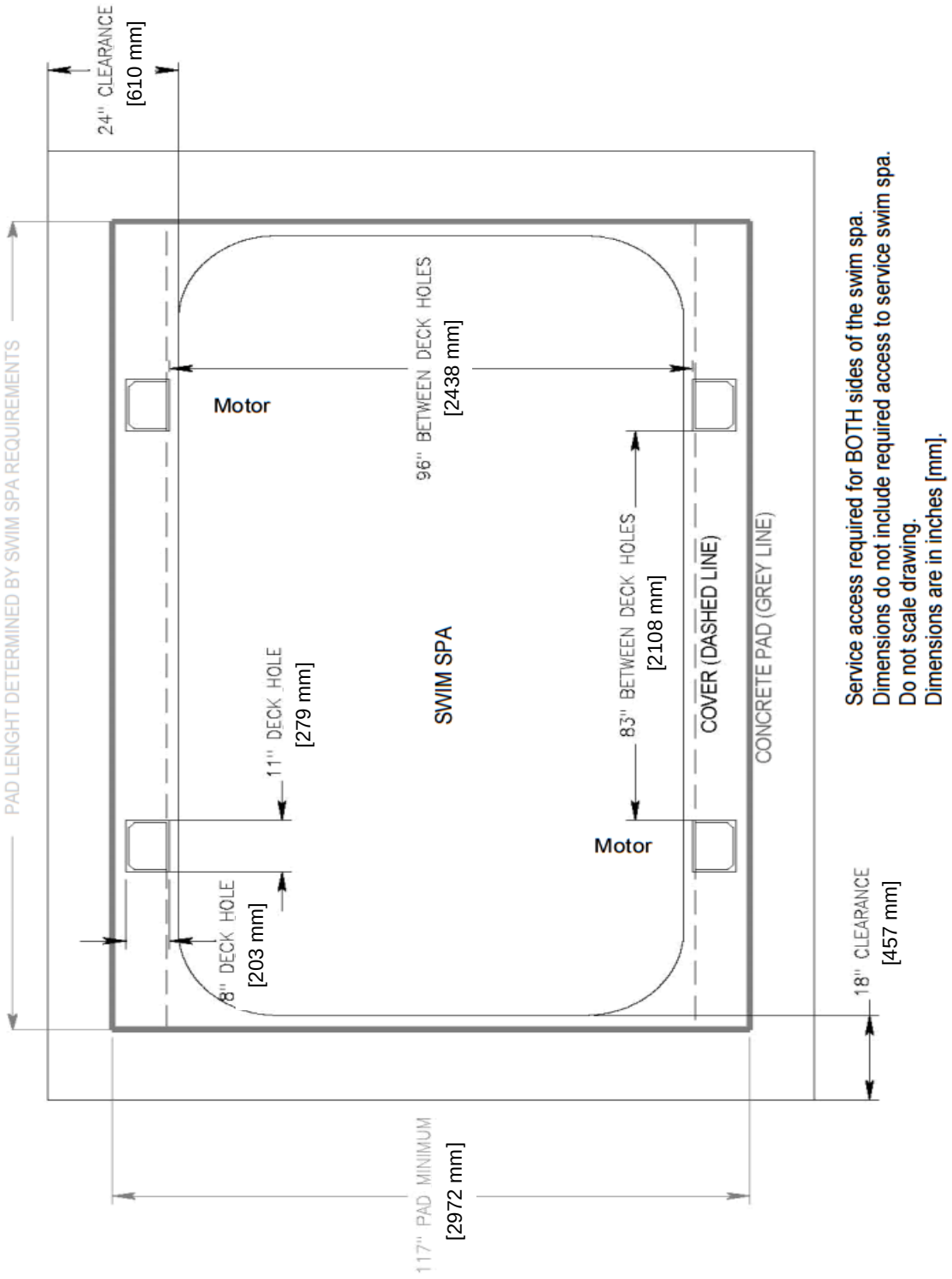


Figure 117

Electrical specifications *(For AC-operated model)*

- The cover requires a dedicated single-phase 115 VAC (North America) or 220 V AC (Europe) hard-wired power supply.
- The cover must be installed in accordance with and comply with all applicable local codes and regulations. All wiring and connections should be performed by a qualified electrician.
- Wires and conduits should be sized according to local codes and regulations.

North American requirements:

Voltage	115 V, 60 Hz (1 hot, 1 neutral, 1 ground)
GFCI	15 A single-pole GFCI *(not included)*
Continuous current draw	3 A

European requirements:

Voltage	220 V, 50 Hz (2 hot, 1 ground)
GFCI	10 A single-pole GFCI *(not included)*
Continuous current draw	1.5 A

⚠WARNING

- COVANA does not allow any modifications of the electrical system. COVANA reserves the right to void the warranty if any modification is done without its specific approval.

Electrical specifications *(For Battery-operated model)*

Required voltage:	24 V DC System
Required wall outlet:	115 V AC for charger North America (220 V AC European model)
Battery:	24 V DC, 12 Ah, AGM sealed lead-acid battery

⚠WARNING

- COVANA does not allow any modifications of the electrical system. COVANA reserves the right to void the warranty if any modification is done without its specific approval.

Operating limitations

⚠WARNING

- The COVANA cover should never be used if the following conditions are reached.

Maximum wind	Gusts of 25 mph (40 km/h) while in the raised position and 37 mph (60 km/h) when completely lowered onto the swim spa.
Maximum weight on the cover (evenly distributed)	200 lb (90 kg)

* The load specification for the LEGEND cover is a provision for environmental outcomes, typically some snow or damp leaves that could accumulate on the cover.

General specifications

Lifting speed	2.5”/sec (6.35 cm/s)
Total weight	835 lb to 920 lb (379 kg to 417 kg) (12’ to 20’ models)
Stock key switch cable	25 ft (7.6 m)

Battery charging *(For Battery-operated models and Emergency-Battery backup only)*

The COVANA Cover includes two 24 V DC battery packs. Since the COVANA cover operates with these batteries, it is essential to maintain and charge your battery packs

1) Use the battery charger provided and plug it in the regular wall power outlet. (110 V North America) (220 V Europe) (Figure 118).

2) Plug the battery charger harness into the battery.

3) A red light should appear to indicate that it is charging.

4) Wait for green light to appear to indicate that the charging process has been completed. (Time may vary for charging.)

⚠WARNING

- Only use the provided charger to charge the batteries.
- Do not charge the battery when connected to the COVANA cover. Completely remove the battery and replace it with the provided second battery.

Note:

You can leave the battery connected to the charger since it will stop charging automatically when the battery is fully charged.

Figure 118

(North America shown)

TROUBLESHOOTING

Problem	Probable Causes	Solutions
COVANA cover does not raise or lower. (Silent motor and no movement)	◆ The GFCI is tripped. ◆ The power source is disconnected. ◆ Battery has low power. ◆ Controller is in “lockout” mode.	◆ Reset the GFCI. ◆ Check if the power source is enabled. ◆ Disconnect the battery for 60 seconds to reset the COVANA controller. ◆ Charge battery. ◆ Check if any electrical cables are damaged or pinched. ◆ Check the breaker panel.
COVANA cover does not raise or lower. (Motor humming and some visible movement)	◆ Posts are frozen. ◆ Cover is obstructed. ◆ Jack assemblies are jammed. ◆ Posts are obstructed. ◆ Power source is disconnected.	◆ Remove all debris from top of COVANA cover. ◆ Check if any posts are obstructed. ◆ Use methanol to free ice buildup on posts. ◆ Grease the post assemblies. ◆ Check the relative position of the posts. (See *Foundation preparation* section on installation manual) ◆ If all previous attempts failed, contact your local authorized COVANA dealer.
Posts are not equally positioned.	◆ A drive shaft has fallen off. ◆ Chain skipped during operation. ◆ A spring pin is missing or broken. ◆ Controller does not calculate the height properly. ◆ Excessive weight on one side of COVANA cover.	◆ Re-install any fallen drive shaft. ◆ Replace any broken chain. ◆ Replace any missing or broken spring pin. ◆ Remove all debris from top of COVANA cover. ◆ If all previous attempts failed, contact your local authorized COVANA dealer.
Middle sleeve has dropped.	◆ The middle sleeve froze on the inner sleeve. ◆ The stopper kit is broken/missing.	◆ Check the position of the all-weather seal. While cover is closed, it must be sitting on the top of the outer sleeve. ◆ Check whether the stopper kit is broken/missing. ◆ If all previous attempts failed, contact your local authorized COVANA dealer.
Escape hatch doesn’t open/close	◆ Mechanism is jammed. ◆ Verify the position of the locking mechanism.	◆ Refer to the *USING THE ESCAPE HATCH* section (User manuel, page 11) ◆ Remove the escape hatch from the underside of the cover and clean it to free the mechanism. ◆ If all previous attempts failed, contact your local authorized COVANA dealer.
Cover raises unevenly	◆ A chain is broken. ◆ A spring pin is broken. ◆ A drive shaft has fallen off.	◆ Contact your local authorized COVANA dealer for technical support immediately. ◆ Do not operate the COVANA cover.
Cover seal turned black.	◆ Seal has accumulated mold.	◆ Clean the affected areas with bleach and a soft brush. Rinse well with water.

(This page intentionally left blank,

See next page)

INSTALLATION CHECKLIST (Customer copy)

To ensure proper installation, you must carefully read this checklist and check that you have completed every step of the installation. The customer must receive a completed copy of this checklist.

(Please check each box when verified)

- ☐ The foundation preparation steps were done correctly. **(Location and foundation preparation sections)**
- ☐ The installation steps were done correctly. **(Uncrating, cover assembly, lifting mechanism and electrical hook-up sections)**
- ☐ The seal was properly installed and there is no steam leaking out around the cover. **(Seal application section)**
- ☐ The wiper brackets are properly installed to ensure the cover is watertight. **(Applying the wiper brackets section)**
- ☐ The key switch is **permanently installed** 5 ft (1.5 m) away from the swim spa and 5 ft (1.5 m) from the ground.
- ☐ All the parts that came with the COVANA cover were installed.
- ☐ The start-up procedure is completed. **(The key sequence responds correctly and Testing the COVANA cover section is performed.)**
- ☐ The all-weather seal functions properly. **(The cover raises and lowers properly.)**
- ☐ The middle sleeves slide freely. **(Manually slide the middle sleeve up and down when the cover is half open.)**

Serial number: _____

Installer's name: _____

Installer's signature: _____

Customer's name: _____

Customer's signature: _____

Customer's address: _____

Date (YYYY/MM/DD): _____

Dealer's name: _____

Contact your authorized COVANA dealer for all service-related issues.

Made in Canada by COVANA,
a division of the Canimex group
www.COVANA.com

PATENTED

CANADA 2,532,429
US 11/162,557
UK 0515168.3
AUSTRALIA 2006200251

The information in this manual was accurate at the time of print. The manufacturer reserves the right to change or improve its product without prior notice.

INSTALLATION CHECKLIST (Installer copy)

To ensure proper installation, you must carefully read this checklist and check that you have completed every step of the installation. The customer must receive a completed copy of this checklist.

(Please check each box when verified)

- ☐ The foundation preparation steps are done correctly. **(Location and foundation preparation sections)**
- ☐ The installation steps were done correctly. **(Uncrating, cover assembly, lifting mechanism and electrical hook-up sections)**
- ☐ The seal was properly installed and there is no steam leaking out around the cover. **(Seal application section)**
- ☐ The wiper brackets were properly installed to ensure the cover is watertight. **(Applying the wiper brackets section)**
- ☐ The key switch is **permanently installed** 5 ft (1.5 m) away from the swim spa and 5 ft (1.5 m) from the ground.
- ☐ All the parts that came with the COVANA cover were installed.
- ☐ The start-up procedure is complete. **(The key sequence responds correctly and Testing the COVANA cover section is performed.)**
- ☐ The all-weather seal functions properly. **(The cover raises and lowers properly.)**
- ☐ The middle sleeves slide freely. **(Manually slide the middle sleeve up and down when the cover is half open.)**

Serial number: _____

Installer's name: _____

Installer's signature: _____

Customer's name: _____

Customer's signature: _____

Customer's address: _____

Date (YYYY/MM/DD): _____

Dealer's name: _____

Contact your authorized COVANA dealer for all service-related issues.

Made in Canada by COVANA,
a division of the Canimex group
www.COVANA.com

PATENTED

CANADA 2,532,429
US 11/162,557
UK 0515168.3
AUSTRALIA 2006200251

The information in this manual was accurate at the time of print. The manufacturer reserves the right to change or improve its product without prior notice.